1. PRODUCT IDENTIFICATION

1.1 Product Name:
PRECISION CLEANER, RADIOSHACK® (P/N #6404345 [C]), 5.5 oz/156g

1.2 Chemical Name:
See ingredients listed in section 3

1.3 Synonyms:
NA

1.4 Trade Names:
Precision Cleaner #6404345 [C]

1.5 Product Use:
Cleaner Compound

1.6 Manufacturer’s Name:
CAIG Laboratories, Inc.

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

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

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

2. IDENTIFICATION OF RISKS

2.1 Hazard Identification:
This product is classified as a hazardous substance and as a dangerous good according to the classification criteria of NOHSC and ADG Code (Australia). WARNING! Flammable aerosol. Contents under pressure. Do not puncture or incinerate. Keep away from heat, sparks, and flame. Use only with adequate ventilation. Keep containers closed when not in use. Gross inhalation over exposure may cause central nervous system depression.

Hazard Statements (H): H223 – Flammable aerosol.

2.2 Routes of Entry:

| Inhalation | YES | Absorption | YES | Ingestion | NO |

2.3 Effects of Exposure:

**EYES:** “Frostbite-like” effects may occur if the liquid or escaping vapors contact the eyes. Mists may cause irritation.

**SKIN:** "Frostbite-like” effects may occur if the liquid or escaping vapors contact the skin. Mists may cause irritation.

**INGESTION:** Not considered to be a potential route of exposure.

**INHALATION:** Gross overexposure may cause central nervous system depression, dizziness, confusion, drowsiness, irregular heartbeat accompanied by a strange feeling in the chest, “heart thumping,” apprehension, light-headedness, weakness, fainting, loss of consciousness, and death.

2.4 Symptoms of Exposure:

**EYES:** No exposure symptoms are reported by the manufacturer.

**SKIN:** No exposure symptoms are reported by the manufacturer.

**INGESTION:** Not considered to be a potential route of exposure.

**INHALATION:** Dizziness, confusion, drowsiness, irregular heartbeat accompanied by a strange feeling in the chest, “heart thumping,” apprehension, light-headedness, weakness, fainting, loss of consciousness, and death.

2.5 Acute Health Effects:

**EYES:** “Frostbite-like” effects may occur if the liquid or escaping vapors contact the eyes. Mists may cause irritation.

**SKIN:** "Frostbite-like” effects may occur if the liquid or escaping vapors contact the skin. Mists may cause irritation.

**INGESTION:** Not considered to be a potential route of exposure.

**INHALATION:** Gross overexposure may cause central nervous system depression, dizziness, confusion, drowsiness, irregular heartbeat accompanied by a strange feeling in the chest, “heart thumping,” apprehension, light-headedness, weakness, fainting, loss of consciousness, and death.

2.6 Chronic Health Effects:
The manufacturer has not reported any chronic health effects.

2.7 Target Organs:
None reported by the manufacturer.

2.8 Toxicological Properties:
None reported by the manufacturer.

NA = Not Available; ND = Not Determined; NE = Not Established; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used
NOTE: all WHMS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2010 format.
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>EXPOSURE LIMITS IN AIR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH</td>
</tr>
<tr>
<td>ISOHEXANE</td>
<td>107-83-5</td>
<td>SA2995000</td>
<td>203-523-4</td>
<td>60-100</td>
<td>1800</td>
</tr>
<tr>
<td>1,1-DIFLUOROETHANE (R-152a)</td>
<td>75-37-6</td>
<td>KI1410000</td>
<td>200-866-1</td>
<td>10-30</td>
<td>1000</td>
</tr>
<tr>
<td>ETHANOL</td>
<td>64-17-5</td>
<td>KG6300000</td>
<td>200-578-6</td>
<td>1-5</td>
<td>1000</td>
</tr>
</tbody>
</table>

4. FIRST AID

4.1 First Aid:
EYES: Flush eyes thoroughly with copious amounts of water for at least 20 minutes, holding eyelids open to ensure complete flushing. Seek immediate medical attention.
SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Launder clothing before reuse.
INGESTION: Do not induce vomiting. Call a physician or poison control center for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.
INHALATION: Remove victim to fresh air at once. If breathing is difficult, provide supplemental oxygen. If breathing has stopped, provide artificial respiration. Seek immediate medical attention. Provide supportive treatment, keeping victim warm and quiet.

4.2 Medical Conditions Aggravated by Exposure:
None reported by the manufacturer.

5. FIRE & EXPLOSION HAZARDS

5.1 Flashpoint & Method:
15 °F (lowest component) TCC

5.2 Autoignition Temperature:
ND

5.3 Flammability Limits:
Lower Explosive Limit (LEL): 1.2% Upper Explosive Limit (UEL): 6.7%

5.4 Fire & Explosion Hazards:
Warning! Contents under pressure! NFPA Level 3 Aerosol. Highly flammable liquid. Cylinders may rupture under fire conditions. This material will become combustible when mixed with air under pressure and exposed to strong ignition sources. Decomposition may occur. Contact of welding or soldering torch flames with high concentrations of refrigerant can result in visible changes in the size and color of the torch flame. The flame effect will only occur in concentrations of product well above the recommended exposure limit, therefore stop all work and ventilate the area before proceeding. Use forced ventilation to disperse refrigerant vapors from the work area before using any open flames.

5.5 Extinguishing Methods:
Use media appropriate for surrounding materials.

5.6 Firefighting Procedures:
Keep containers cool until well after the fire is out. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters should wear full-face, self-contained breathing apparatus (MSHA/NIOSH approved or the equivalent) and impervious clothing.

6. SPILLS & LEAKS

6.1 Spills:
Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply. Contact appropriate local and/or provincial authorities for assistance and/or reporting requirements.
7. STORAGE & HANDLING

7.1 Work & Hygiene Practices:
Use normal hygiene practices. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking.

7.2 Storage & Handling:
Use and store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Do not store near or with any incompatible materials listed in section 10. Do not store in unmarked or open containers. Protect cylinders from physical damage. Do not store in subsurface areas.

7.3 Special Precautions:
Readily available emergency fire, first aid, and spill response equipment and/or measures are highly recommended.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

8.1 Ventilation & Engineering Controls:
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 or enclosed places. Refrigerant concentration monitors may be necessary to determine vapor concentrations in work areas prior to use of torches or other open flames, or if employees are entering enclosed areas.

8.2 Respiratory Protection:
A respiratory protection program that meets ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirators use.

8.3 Eye Protection:
Safety glasses with side shields should be used with this product. If splashing is anticipated, splash goggles and a faceshield are recommended.

8.4 Hand Protection:
Where contact is likely, impervious gloves are recommended. Do not wear rings, watches, or jewelry that could entrap the material against the skin.

8.5 Body Protection:
None required under normal conditions.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Density:
3.5

9.2 Boiling Point:
195 °F

9.3 Melting Point:
ND

9.4 Evaporation Rate:
> 1.0 (liquid)

9.5 Vapor Pressure @ 20°C:
2.3 psia @ 100 °F (liquid)

9.6 Molecular Weight:
NA

9.7 Appearance & Color:
Colorless to pale yellow liquid

9.8 Odor Threshold:
Mild

9.9 Solubility:
Negligible

9.10 pH:
ND

9.11 Viscosity:
0.83 cSt @ 100 °F (liquid)

9.12 Coefficient Oil/Water Distribution:
NA

9.13 Additional Information:
Bulk density at 20 °C 5.8 lb/gal (liquid); VOC Content: > 94%

10. STABILITY & REACTIVITY

10.1 Stability:
Stable under normal conditions.

10.2 Decomposition Products:
Warning! Hazardous decomposition products are hazardous. Thermal decomposition can yield hydrofluoric acid and possibly carbonyl fluoride. These materials are toxic and irritating. Contact should be avoided.

10.3 Polymerization:
Will not occur.

10.4 Conditions to Avoid:
Open flames, sparks, high heat, and close proximity to incompatible substances. Storage in poorly ventilated areas.

10.5 Incompatible Substances:
Strong oxidizing agents, magnesium, aluminum, (and their alloys), brass and steel.
11. TOXICOLOGICAL INFORMATION

11.1 Toxicity Data:
This product has not been tested on animals to obtain toxicological data. There are toxicology data for the components of this product, which are found in the scientific literature. Animal studies have shown that this material is a slight irritant, but not a sensitizer.

11.2 Acute Toxicity:
See Section 2.5

11.3 Chronic Toxicity:
See Section 2.6

11.4 Suspected Carcinogen:
This product is not a suspected carcinogen in humans.

11.5 Reproductive Toxicity:
Mutagenicity: This product is not expected to cause reproductive harm in humans.
Embryotoxicity: This product is not expected to cause reproductive harm in humans.
Teratogenicity: This material is not expected to cause teratogenic effects in humans.
Reproductive Toxicity: This product is not expected to cause reproductive harm in humans.

11.6 Irritancy of Product:
Slight

11.7 Biological Exposure Indices:
NA

11.8 Medical Recommendations:
Treat symptomatically. Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should only be used with special caution in situations of emergency life support.

12. ECOLOGICAL INFORMATION

12.1 Environmental Stability:
The manufacturer has not reported detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.

12.2 Effect on Plants & Animals:
The manufacturer has not reported any plant or animal effects.

12.3 Effect on Aquatic Life:
The manufacturer has not reported any aquatic life effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Disposal:
Dispose of in accordance with local & provincial hazardous waste laws.

13.2 Special Considerations:
If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance.

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/ICAO, IMDG and the CTDGR.

14.1 49 CFR (GND):
CONSUMER COMMODITY, ORM-D* - available until 01/01/2014
UN1950, AEROSOLS, 2.1, LTD QTY (≤ 1.0 L)

14.2 IATA (AIR):
ID8000, CONSUMER COMMODITY, 9 (≤ 0.5 L)
UN1950, AEROSOLS, 2.1, LTD QTY (≤ 1.0 L)

14.3 IMDG (OCN):
UN1950, AEROSOLS, 2.1, LTD QTY

14.4 TDGR (Canadian GND):
MARK PACKAGE "LIMITED QUANTITY" or "QUANTITÉ LIMITÉE" or "LTD QTY" or "QUANT LTÉE"
UN1950, AEROSOLS, 2.1, LTD QTY (≤ 1.0 L)

14.5 ADR/RID (EU):
UN1950, AEROSOLS, 2.1, LTD QTY (≤ 1.0 L)

14.6 SCT (MEXICO):
UN1950, AEROSOLES, 2.1, CANTIDAD LIMITADA (≤ 1.0 L)

14.7 ADGR (Australia):
UN1950, AEROSOLS, 2.1, LTD QTY (≤ 1.0 L)
15. REGULATORY INFORMATION

15.1 SARA Reporting Requirements:
This product does not contain any substances that are subject to SARA Section 313 reporting requirements.

15.2 SARA Threshold Planning Quantity:
NA

15.3 TSCA Inventory Status:
All chemical substances of this product are listed on the TSCA inventory or are otherwise exempt from inventory status.

15.4 CERCLA Reportable Quantity (RQ):
NA

15.5 Other Federal Requirements:
NA

15.6 Other Canadian Regulations:
This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS 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:
Isohexane can be found on the following state right to know lists: Pennsylvania, Minnesota, and Massachusetts. Difluoroethane can be found on the following state criteria lists: Massachusetts Hazardous Substances List, New Jersey Right-to-Know List, and Pennsylvania Hazardous Substances List. Difluoroethane is not listed on the California Proposition 65 list. Ethanol can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, and Massachusetts. California Prop 65 – Ethanol (as an alcoholic beverage) is listed on the California Proposition 65 list. None of the other chemicals in this product are listed on this state criteria list.

15.8 67/548/EEC (European Union) Requirements:
The primary components of this product are listed in Annex I of EU Directive 67/548/EEC.
WARNING! Flammable aerosol. Contents under pressure. Do not puncture or incinerate. Keep away from heat, sparks, and flame. Use only with adequate ventilation. Keep containers closed when not in use. Gross inhalation over exposure may cause central nervous system depression.

Hazard Statements (H):
H223 – Flammable aerosol.

## 16. OTHER INFORMATION

### 16.1 Other Information:

**NA**

### 16.2 Terms & Definitions:

Please see last page of this Material Safety Data Sheet.

### 16.3 Disclaimer:

This Material 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’s & CAIG Laboratories, Inc.’s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are 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
780 Buckaroo Trail Suite D
Sisters, OR 97759
Tel: +1 (310) 370-3600
Fax: +1 (310) 370-5700
http://www.shipmate.com
SAFETY DATA SHEET

GENERAL INFORMATION:

- CAS No.: Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

- ACGIH: American Conference on Governmental Industrial Hygienists
- TLV: Threshold Limit Value
- OSHA: U.S. Occupational Safety and Health Administration
- PEL: Permissible Exposure Limit
- IDU: Immediately Dangerous to Life and Health

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.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

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.

OTHER STANDARD ABBREVIATIONS:

- NA: Not Available
- NR: No Results
- NE: Not Established
- ND: Not Determined
- ML: Maximum Limit
- SCBA: Self-Contained Breathing Apparatus

NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

- Autoignition Temperature: Minimum temperature required to initiate combustion in air with no other source of ignition
- LEL: Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
- UEL: Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

DEFINITION OF TERMS

- OSHA: Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS, 2001/58/EC & 1272/2008/EC Standards

TOXICOLOGICAL INFORMATION:

- LD₅₀: Lethal Dose (solids & liquids) which kills 50% of the exposed animals
- LC₅₀: Lethal concentration (gases) which kills 50% of the exposed animal
- ppm: Concentration expressed in parts of material per million parts
- TL₅₀: Lowest dose to cause a symptom
- TCLo: Lowest concentration to cause a symptom
- TD₅₀, TD₅₀, & LD₅₀ or TC, TC, LC₅₀, & LC₅₀: Lowest dose (or concentration) to cause lethal or toxic effects
- IARC: International Agency for Research on Cancer
- NTP: National Toxicology Program
- RTECS: Registry of Toxic Effects of Chemical Substances
- BCF: Bioconcentration Factor
- T₅₀: Median threshold limit
- log Kₐq or log Kₐq: Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

- WHMIS: Canadian Workplace Hazardous Material Information System
- DOT: U.S. Department of Transportation
- TC: Transport Canada
- TSCA: U.S. Toxic Substance Control Act
- WIGK: Wassergefährdungsklassen (German Water Hazard Class)

WORKPLACE HAZARDOUS MATERIALS IDENTIFICATION (WHMIS) SYSTEM:

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

EC (67/548/EEC) INFORMATION:

- C: Corrosive
- E: Explosive
- F: Flammable
- N: Noxious
- O: Oxidizing
- T: Toxic
- XI: Irritating
- Xn: Harmful

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