Diamond Liqui-Tool
Chemicals/Rawn Chemicals
Material Safety
Data Sheet

IDENTITY
Liqui-Tool® 1414-12, Freon® 22 Dust-A-Way

Section I
Manufacturer's Name
RAWN COMPANY, INC.
Address (Number, Street, City, State, and ZIP Code)
P.O. Box 9
Hwy. 53 South
Spooner, WI 54801
Emergency Telephone Number
Daytime (715) 635-8711
After Hours (715) 635-8102
Emergency Telephone Number for Information
(715) 635-8711
Date Prepared
5-21-90
Revised

Signature of Preparer
Robert M. Eckhorn

Section II — Hazardous Ingredients/Identity Information

Hazardous Components | CAS # | OSHA PEL | ACGIH TLV | Other Limits Recommended (STEL)
--- | --- | --- | --- | ---
Chlorodifluoromethane | 75-45-6 | 1000 ppm | 3500 mg/m³ | not established

Section III — Physical/Chemical Characteristics

Boiling Point °F | -41.4
Vapor Pressure (mm Hg) (at 77 °F.) | 7046
Vapor Density (Air = 1) (at 77 °F.) | 3.03
Solubility in Water | 0.30% at 77 °F.
Specific Gravity (H₂O = 1) (at 77 °F.) | 1.194
Melting Point | n/a
Evaporation Rate | XXXXXXXX
Appearance and Odor | Clear, colorless, liquified gas, slight ethereal odor.

Section IV — Fire and Explosion Hazard Data

Flammable Limits | EEL | UEL
--- | --- | ---
None (TOC) | n/a | n/a

Extinguishing Media | As appropriate for surrounding combustibles.

Special Fire Fighting Procedures | Self-contained breathing apparatus may be required if containers rupture and release contents under fire conditions. Cool containers with water spray.

Unusual Fire and Explosion Hazards | High temperatures may cause container failure. Exposure to heat and flame may cause decomposition, production of hazardous byproducts.
Section V — Reactivity Data

<table>
<thead>
<tr>
<th>Stability</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstable</td>
<td></td>
</tr>
<tr>
<td>Stable</td>
<td>X Avoid high temperatures, open flame.</td>
</tr>
</tbody>
</table>

Incompatibility (Materials to Avoid)

Avoid contact with alkali or alkaline earth metals, powdered Al, Zn,
Be and so forth.

Hazardous Decomposition or By products

Hydrochloric and hydrofluoric acids, possibly carbonyl halides.

Hazardous Polymerization

<table>
<thead>
<tr>
<th>May Occur</th>
<th>Conditions to Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will Not Occur</td>
<td>X n/a</td>
</tr>
</tbody>
</table>

Section VI — Health Hazard Data

See Attachment

This product does not contain any ingredients classified as carcinogenic by NTP, IARC, or OSHA.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled

Remove open flames, ventilate area, especially low places. Product evaporates rapidly.

Waste Disposal Method

Comply with all Federal, State and local regulations.

Precautions to Be Taken in Handling and Storing

Store away from high temperatures, open flames, and incompatibles. Store out of direct sunlight. Store under 125°F.

Other Precautions

Avoid prolonged breathing of vapors, contact with skin and eyes. Use with adequate ventilation.

Section VIII — Control Measures

Respiratory Protection (Specify Type)

Not required with normal use. Wear a NIOSH approved self-contained respirator for organic vapors if TLV is exceeded, an air-supplied respirator in confined spaces or extreme concentrations.

Ventilation

<table>
<thead>
<tr>
<th>Local Exhaust</th>
<th>Special</th>
<th>n/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>when large amounts are released</td>
<td>in low places</td>
<td></td>
</tr>
</tbody>
</table>

Mechanical (General)

| n/a |

Protective Gloves

Lined butyl gloves

Eye Protection

Chemical safety goggles

Other Protective Clothing or Equipment

Wear as needed to prevent prolonged or repeated skin contact during use.

Work/Hygienic Practices

General hygienic practices include washing hands after use, before eating, drinking, or smoking, with soap and water.

These data are offered in good faith as typical values and not as a product specification. No warranty, either express or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations.
HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

EYE
Irritant - frostbite is possible.

SKIN
Frostbite is possible.

INHALATION
Inhalation of high concentrations of vapors is harmful and can cause heart irregularities, unconsciousness, or death. Intentional misuse can be fatal. Vapor reduces oxygen available for breathing and is heavier than air.

INGESTION
Not considered a likely route for exposure.

SUBCHRONIC AND CHRONIC EFFECTS OF OVEREXPOSURE

Toxic effects described in animals from exposure by inhalation, ingestion or skin contact include central nervous system effects, anesthetic effects, cardiovascular effects, lung effects, liver effects, kidney effects, and spleen effects. In a 2-year inhalation study, a significantly increased incidence of salivary gland tumors was observed in male rats exposed to a 5% concentration of Freon® 22. Tests for mutagenic activity in bacterial or mammalian cell structures have been inconclusive, with positive results in some studies, and negative results in others. Tests in some animals indicate that the compound may have embryotoxic activity, but only at maternally toxic concentrations. Tests in animals demonstrate no reproductive toxicity.

Human health effects of overexposure by inhalation, ingestion, skin or eye contact may initially include central nervous system effects. Higher exposures may lead to temporary alteration of the heart's electrical activity with irregular pulse, palpitations, or inadequate circulation; or fatality from gross overexposure. Freon® 22 vaporized quickly at ambient temperatures; therefore, data available to evaluate the skin permeation hazard of this compound are insufficient. There are no reports of human sensitization.

CARCINOGENICITY

This product is not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

FIRST AID AND EMERGENCY PROCEDURES

INHALATION
Remove victim to fresh air. If not breathing, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, call a physician.

SKIN CONTACT
Flush effected area with water. Treat for frostbite if necessary.

EYE CONTACT
Immediately flush eyes with plenty of water. Call a physician.

INGESTION
Not considered a likely route for exposure.

NOTE TO PHYSICIAN

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

Note: Inhalation 0.25 hour LC50 - 350,000 ppm for rats.