1. Product and Company Identification

Manufacturer/Distributor: Rainbow Technology Corporation (800) 637-6047  
Contact Person: Larry Joe Steeley, Jr.  
Emergency Phone (24 Hrs.) Chem-Tel Inc (800) 255-3924  
Trade Name/Synonyms: Rainbow CP Wipe (4215) Rainbow CP Cleaner (42153)  
Product Number: 4215 (wipe) 42153 (gallon)  
Issue Date: February 26, 2016  
Replaces SDS Dated: April 8, 2014

2. Hazards Identification

Classification

<table>
<thead>
<tr>
<th>Skin irritation</th>
<th>Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye irritation</td>
<td>Category 2B</td>
</tr>
<tr>
<td>Carcinogen</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3 – (H335, H336)</td>
</tr>
<tr>
<td>Ingestion (Acute Toxicity Oral)</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

Emergency Overview

Rainbow CP Cleaner/CP Wipe has no flash point and is non-flammable per OSHA and DOT regulations. Vapors will form a flammable mixture at a concentration of 3.8% to 9.5% by volume with air (ASTM E-681).

Signal Word: Danger

Hazard Statements
H303 May be harmful if swallowed
H315 Causes skin irritation.
H320 Causes eye irritation.
H333 May be harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H360 May damage fertility.

**Prevention**

P202 Do not handle until all safety precautions have been read and understood.
P233 Keep container tightly closed.
P260 Do not breathe vapors.
P262 Do not get in eyes, on skin or clothing.
P270 Do not eat, drink or smoke when using this product.
P271 Use in a well-ventilated area.
P273 Avoid release into the environment.
P280 Wash face, hands and any exposed skin thoroughly after handling. Wear safety glasses or full face shield. Wear Viton gloves. DO NOT use natural rubber gloves when handling this product.
P281 Use personal protective equipment as required.
P284 Wear respiratory protection.

**Response**

P308 + P313 IF EXPOSED or concerned: Get medical advice/attention
P305 + P351 + P338 + P337 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists, get medical advice/attention
P303 + P361 + P353 + P352 IF ON SKIN: remove immediately all contaminated clothing. Wash with plenty of soap and water. P332 + P313 If skin irritation occurs, get medical advice/attention.
P304 + P340 IF INHALED: Remove individual to fresh air and keep at rest in a position comfortable for breathing.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
P306 + P361+ P363 IF ON CLOTHING: remove immediately all contaminated clothing. Wash contaminated clothing before reuse.

**Storage & Disposal:** Store in well ventilated area in tightly closed containers. Dispose of containers at an approved waste disposal plant.

**3. Composition and Ingredient Information** Specific components and amounts of components comprise Trade Secrets per 1920.1200(i)(1).
### n-Propyl bromide

**Molecular Formula:** $\text{C}_3\text{H}_7\text{Br}$

**Synonyms:** 1-Bromopropane, nPB, 1-BP

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-94-5</td>
<td>&gt;90</td>
</tr>
</tbody>
</table>

### 1,2 butylene oxide

**Synonym:** 1,2 epoxybutane

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-88-7</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

### 2-butanol

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>78-92-2</td>
<td>&lt; 2</td>
</tr>
</tbody>
</table>

### Dimethoxymethane

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>109-87-5</td>
<td>&lt; 3</td>
</tr>
</tbody>
</table>

### Isopropanol

<table>
<thead>
<tr>
<th>CAS NO.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-63-0</td>
<td>&lt; 6</td>
</tr>
</tbody>
</table>

### 4. First Aid Measures

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INHALATION</strong></td>
<td>Remove person to fresh air. Give oxygen if breathing is difficult. Apply CPR respiration if individual is not breathing.</td>
</tr>
<tr>
<td><strong>EYE</strong></td>
<td>Flush eyes with water for at least 15 minutes. Seek emergency medical advice.</td>
</tr>
<tr>
<td><strong>SKIN</strong></td>
<td>Wash contaminated areas immediately with soap and water. Remove contaminated clothing and shoes. Seek medical advice.</td>
</tr>
<tr>
<td><strong>INGESTION</strong></td>
<td>Drink large amounts of water. DO NOT induce vomiting. Seek emergency medical advice. Rinse mouth with water.</td>
</tr>
</tbody>
</table>

### 5. Fire Fighting Measures

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXTINGUISHING MEDIA</strong></td>
<td>Extinguishing media should be chosen based on surrounding conditions. Water may be effective for cooling but not extinguishing. Carbon dioxide, dry chemical powder, alcohol foam or polymer foam.</td>
</tr>
<tr>
<td><strong>FIRE FIGHTING PROCEDURE</strong></td>
<td>Use NIOSH approved self-contained breathing apparatus in positive pressure mode. Use water spray or fog to cool exposed equipment and containers.</td>
</tr>
<tr>
<td><strong>UNUSUAL FIRE AND EXPLOSION HAZARDS</strong></td>
<td>Do not weld or torch cut drums containing residual vapors, as vapors may be in the flammable range and an explosion could occur. Thermal decomposition may produce carbon monoxide, carbon dioxide, hydrogen halide and bromides.</td>
</tr>
</tbody>
</table>

### 6. Accidental Release Measures

Contain spillage or leakage with dikes or absorbent material to prevent migration into sewer or waterway. For large spills, evacuate and ventilate the area. Wear self-contained breathing apparatus and recommended personal protective equipment. Absorb with earth, sand, or other non-combustible absorbent material and place in closed container for disposal.
7. **Handling and Storage**

<table>
<thead>
<tr>
<th>HANDLING</th>
<th>Wear safety glasses or full face mask. Use gloves when contact with product may occur. DO NOT use natural rubber gloves when handling this product. Viton or Silvershield gloves offer the best extended protection. Nitrile, neoprene or butyl gloves offer less protection and should be used for splash protection only.</th>
</tr>
</thead>
<tbody>
<tr>
<td>STORAGE</td>
<td>Store in well ventilated, cool, dry area away from incompatible materials (see materials to avoid). Keep container closed when not in use. Minimize introduction of water or moisture into the product. Keep away from heat, sparks, and open flame.</td>
</tr>
</tbody>
</table>

8. **Exposure Controls and Personal Protection**

<table>
<thead>
<tr>
<th>EXPOSURE LIMITS</th>
<th>In all cases, worker exposure to all chemicals, including this product should be kept as low as possible. No OSHA PEL has been published for n-propyl bromide. USEPA states an exposure level to nPB in the range of 18 to 30 ppm is protective of workers. (Federal Register May 30, 2007). ACGIH TLV - .10 ppm for n-propyl bromide. The documentation for the ACGIH nPB TLV states that the TLV applies to nPB with an iPb content of 0.1 to 0.2 % by weight. The iPb content of nPB in ECOMAX products is shown by GC analysis to be at or more than an order of magnitude below that level, at 0.01% or below. 2-butanol OSHA PEL 1500 ppm Dimethoxymethane OSHA PEL 1000 ppm Isopropanol OSHA PEL 500 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY PROTECTION</td>
<td>Use full face piece, NIOSH approved organic vapor respirator.</td>
</tr>
<tr>
<td>CLOTHING/GLOVES</td>
<td>Use gloves when contact with product may occur. DO NOT use natural rubber gloves when handling this product. Viton or Silvershield gloves offer the best extended protection. Nitrile, neoprene or butyl gloves offer less protection and should be used for splash protection only.</td>
</tr>
<tr>
<td>EYE PROTECTION</td>
<td>Always wear safety goggles or full face shield.</td>
</tr>
<tr>
<td>WORK/HYGIENIC PRACTICES</td>
<td>Do not eat, drink or smoke while working with this product. Launder soiled clothes. Provide emergency eye bath and safety shower.</td>
</tr>
</tbody>
</table>

**Appropriate Engineering Controls:** Showers, Eye wash stations, Ventilation systems

9. **Physical Properties**

<table>
<thead>
<tr>
<th>APPEARANCE</th>
<th>Clear, colorless to yellow liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>ODOR</td>
<td>Characteristic</td>
</tr>
<tr>
<td>pH LEVEL (water extract)</td>
<td>6.8 estimated based on nPB</td>
</tr>
</tbody>
</table>
**Safety Data Sheet (SDS)**

<table>
<thead>
<tr>
<th>INITIAL BOILING POINT AND BOILING POINT RANGE</th>
<th>159°F (70°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MELTING POINT / FREEZING POINT</td>
<td>Not Determined</td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>None ASTM D-56 TCC, ASTM D-92 COC, ASTM D-93 TCC</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>Not Determined</td>
</tr>
<tr>
<td>UPPER/LOWER FLAMMABILITY LIMITS</td>
<td>3.8% to 9.5% by volume with air</td>
</tr>
<tr>
<td>VAPOR PRESSURE, mm Hg</td>
<td>139 @ 25°C</td>
</tr>
<tr>
<td>VAPOR DENSITY</td>
<td>Not Determined</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY (25/25°C, H₂O = 1)</td>
<td>1.28 ± 0.01</td>
</tr>
<tr>
<td>WATER SOLUBILITY g/100mL @ 25°C</td>
<td>0.24 estimated based on nPB</td>
</tr>
<tr>
<td>PARTITION COEFFICIENT (noctanol/water)</td>
<td>No information available</td>
</tr>
<tr>
<td>AUTO-IGNITION TEMPERATURE</td>
<td>860°F (460°C)</td>
</tr>
<tr>
<td>DECOMPOSITION TEMPERATURE</td>
<td>No information available</td>
</tr>
<tr>
<td>VISCOSITY</td>
<td>No information available</td>
</tr>
</tbody>
</table>

**10. Stability and Reactivity**

<table>
<thead>
<tr>
<th>STABILITY</th>
<th>Stable under normal conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONDITIONS TO AVOID</td>
<td>Avoid open flame, electric arc and other high energy ignition sources. Prolonged contact with free water may result in diminished stabilizer and corrosion.</td>
</tr>
<tr>
<td>INCOMPATIBILITY</td>
<td>Incompatible with strong alkalies, oxidizers, bases, reactive metals and natural rubber.</td>
</tr>
<tr>
<td>HAZARDOUS DECOMPOSITION</td>
<td>Thermal decomposition produces carbon monoxide, carbon dioxide, and hydrogen bromide.</td>
</tr>
<tr>
<td>HAZARDOUS POLYMERIZATION</td>
<td>Will not occur.</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>Organic Peroxide: No; Pyroforic: No; Water Reactive: No</td>
</tr>
</tbody>
</table>

**11. Toxicological Information**

**n propyl bromide**

LD₅₀ oral rat: 4,260 mg/kg  
LC₅₀ inhalation rat: 30 min. 50,291 ppm  
4 hr 14,374 ppm

High concentrations are irritating to the respiratory tract and may cause headache, dizziness, nausea, vomiting or narcosis. Chronic overexposure at high levels may cause adverse effects in the central nervous system, reproductive system, respiratory system, kidney and liver. Persons having pre-existing diseases of the lungs, eyes or skin may have an increased susceptibility to the hazards of excessive exposure. Cancer: NTP: - reasonably anticipated to be a human carcinogen. IARC - Not listed. Mutagenic Effects: In vivo mutagenicity tests: Negative
12. Ecological Information

“Available data on the organic carbon partition coefficient (K_{OC}) the breakdown processes in water and hydrolysis half-life, and the volatilization half-life indicate that nPB is less persistent in the environment than many solvents and would be of low to moderate concern for movement in soil. Based on the LC_{50}, the acute concentration at which 50% of tested animals die, nPB’s toxicity to aquatic life is moderate, being less than that for ... trichloroethylene, hexane, d-limonene, and possibly some aqueous cleaners. Based on EPA’s criteria for listing under the Toxics Release Inventory (U.S. EPA, 1992), we believe that nPB would not be sufficiently toxic to aquatic life to warrant listing under the Toxics Release Inventory. Based on its relatively low bio-concentration factor and log K_{OW} value, nPB is not prone to bioaccumulation.” (USEPA - Federal Register May 30, 2007).

| K_{OC}, ORGANIC-CARBON PARTITION COEFFICIENT | 330 |
| BREAK DOWN IN WATER | Hydrolysis is significant |
| HYDROLYSIS HALF-LIFE | 26 DAYS |
| VOLATILIZATION HALF-LIFE FROM SURFACE WATERS | 3.4 HOURS – 4.4 DAYS |
| LC_{50} (96 HOURS) FOR FATHEAD MINNOWS | 67 mg/l |
| LOG K_{OW} | 2.10 |
| BIOCONCENTRATION FACTOR | 23 |

13. Disposal Considerations

Follow Federal, State and Local governmental regulations. DO NOT flush into sanitary sewer or waterway. Do not reuse container.

14. Transportation Information

| HAZARDOUS MATERIAL DESCRIPTION | Not regulated for transportation. |
| DOT DESCRIPTION/PROPER SHIPPING NAMES | Non Hazardous Cleaning Solvent Mixture |

15. Regulatory Information

NAFTA: 3814.00.50.90 Preference Criteria B - Originating in NAFTA territory.
TCSA: All of the components of this product are in the EPA TSCA inventory and are in compliance with 15 USC 2601-2629.
NESHAP: N/A
RCRA: N/A
HAP: N/A
VOC: 11 lbs per gal
Safety Data Sheet (SDS)

SARA:  SARA 313 Components subject to reporting: 1,2-butylene oxide CAS 106-88-7 <1% by weight. Sec-butyl alcohol CAS 789-92-2 <2.0 % by weight

CERCLA:  40 CFR 302.4 Component: 1,2-butylene oxide CAS 106-88-7 <1% by weight. Requires discharge of 20,000 lbs of ECOMAX to reach RQ of 100 lbs.

STATE REGULATION:  n-Propyl bromide: WARNING: Known to the State of California to cause birth defects or other reproductive effects. CAL/OSHA PEL 5 ppm Right to Know: Massachusetts, New Jersey, Pennsylvania.

1,2-Butylene oxide: Right to Know: Massachusetts, New Jersey, Pennsylvania.

SNAP:  The Environmental Protection Agency (EPA) approved n-propyl bromide (nPb) as an acceptable substitute for ozone depleting compounds in the precision cleaning sector under the Significant New Alternatives Program (SNAP) Section 612 Clean Air Act. (USEPA - Federal Register May 30, 2007).

WHMIS:  Class D Division 2B, WHMIS - HC-1

EEC (EINECS): Ingredients Listed

CANADA (DSL): Ingredients Listed

JAPAN (MITI): Ingredients Listed

AUSTRALIA (AICS): Ingredients Listed

SOUTH KOREA (ECL): Ingredients Listed

16. Other Information

Each user of this product should study this SDS carefully and consult appropriate expertise as necessary to become aware of and understand the data contained in this SDS and any hazards that may be associated with this product. The information provided in this Safety Data Sheet relates only to the specific material designated herein. The user is responsible for determining the conditions of safe use of this product and for complying with all Federal, State and Local governmental laws and regulations concerning its use. Rainbow Technology Corporation makes no warranty, express or implied, including the warranty of merchantability and fitness for a particular purpose, and assumes no liability or responsibility for the accuracy, completeness, timeliness or usefulness of this information. Rainbow Technology Corporation assumes no liability for any damages incurred, whether directly or indirectly, as a result of any errors, omissions or discrepancies in this information. Rainbow Technology Corporation assumes no liability for reliance on this data and assumes no liability for damages related to the use or misuse of this product.