



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

|   |  |  |  |
|---|--|--|--|
| <b>PRODUCT NAME:</b> Lightning Spray® Redwop™   |  | <b>DATE:</b> August 1, 2011  |  |
| <b>PRODUCT NUMBER(S):</b> 1-0410 (1004004)  |  |  |  |
| TRADE NAME: Lightning Spray® Redwop™<br>GENERAL USE: Fingerprinting<br>CHEMICAL FAMILY: Organics<br>PRODUCT DESCRIPTION:<br>Flammable aerosol propellant and powder (red) with a characteristic odor. |  |  |  |
| <b>MANUFACTURED FOR:</b><br><b>Safariland, LLC</b>  |  | <b>DATE PREPARED:</b> August 1, 2011   |  |
|   |  | <b>SUPERSEDES:</b> September 30, 2009  |  |
| <b>ADDRESS (NUMBER, STREET, P.O. BOX)</b><br>13386 International Parkway  |  | <b>TELEPHONE NUMBER FOR INFORMATION / Customer Service</b><br>800-347-1200   |  |
| <b>(CITY, STATE AND ZIP CODE)</b><br>Jacksonville, FL 32218   | <b>COUNTRY</b><br>USA  | <b>CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER</b><br> 1-800-255-3924      01-813-248-0585<br>North America Toll Free      International |  |

## SECTION 2 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**  
Extremely flammable aerosol. Irritating to skin, eyes, and respiratory system. Vapors may cause drowsiness and dizziness. Keep out of the reach of children.

**POTENTIAL HEALTH EFFECTS**

**INHALATION:**  
Irritation of the mucous membranes, coughing, wheezing, shortness of breath, and dyspnea.

**SKIN:**  
Capable of causing mild irritation, especially with chronic or prolonged contact. May cause dryness or cracking of the skin.

**EYES:**  
Causes moderate irritation - potentially causes both chemical and mechanical irritation, with redness, tearing, and pain/burning.

**INGESTION:**  
Unlikely as product is an aerosol.

**CARCINOGENICITY:**  
 NTP? **No**      IARC MONOGRAPHS? **No**      OSHA REGULATED? **No**  
 CALIFORNIA, Prop.65? **No**

## SECTION 3 - HAZARDOUS INGREDIENTS

| Hazardous Components | % (by Weight) | CAS #          | EINECS #         | Hazard Symbol | RISK PHRASES<br>(Full Text Section 15) |
|----------------------|---------------|----------------|------------------|---------------|--|
| <b>Isobutane</b>     | <b>NR</b>     | <b>75-28-5</b> | <b>200-857-2</b> | <b>F+, Xi</b> | <b>R12, R36/37/38</b>                  |
| <b>Isopropanol</b>   | <b>NR</b>     | <b>67-63-0</b> | <b>200-661-7</b> | <b>F, Xi</b>  | <b>R11, R36/37/38</b>                  |
| <b>Dye/ Extender</b> | <b>NR</b>     | <b>NR</b>      | <b>NR</b>        | <b>None</b>   | <b>None</b>                            |

Notes: Hazard symbols and risk phrases based on maximum listed concentration of each hazardous ingredient.

## SECTION 4 - FIRST AID MEASURES

**INHALATION:**  
Remove victim to fresh air, administer oxygen and/or artificial respiration if unconscious. Contact a physician immediately.

**EYES:**  
Check for and remove contact lenses. Flush eyes with clear running water for 15 minutes while holding eyelids open; if irritation persists, seek medical attention. Do not use over-the-counter products except under physician directions.

**SKIN:**  
Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse; if irritation persists, seek medical attention.

**INGESTION:**  
In the unlikely case of ingestion, DO NOT INDUCE VOMITING!!! If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs. Seek immediate emergency medical attention; transport container with victim to assist with treatment.

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## SECTION 5 - FIRE FIGHTING MEASURES

**GENERAL HAZARDS:**

Forms explosive mixtures with air even at ambient temperatures. Development of hazardous combustion gases or vapors possible in the event of fire (CO, Carbon Monoxide). Special protective equipment for fire fighting: do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

**EXTINGUISHING MEDIA:**

CO2 (Carbon Dioxide), alcohol-resistant foam, powder.

**FIRE FIGHTING PROCEDURES:**

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Forms explosive mixtures with air even at ambient temperatures. Development of hazardous combustion gases or vapors possible in the event of fire (CO, Carbon Monoxide).

**HAZARDOUS COMBUSTION PRODUCTS:**

Carbon Monoxide, Carbon Dioxide.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

**Person-related precautionary measures:** avoid substance contact. Do not breathe mists or dusts. Wear protective clothing. Keep unprotected persons away. Use only in well ventilated areas.

**Procedures for cleaning/absorption:** ensure adequate ventilation. Wear PPE as described in Section 8. Wipe up with towel. Treat discarded material as a respiratory hazard. Treat empty aerosol cans as flammable.

## SECTION 7 - HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Ensure good ventilation / exhaust at the workplace. Aerosol product, do not expose to temperatures >30°C. Do not incinerate containers even when empty. Do not puncture. Do not spray on flame or other ignition sources-No smoking. Store in a cool well-ventilated place. Observe official regulations on storing packaging with pressurized containers.

## SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

| HAZARDOUS COMPONENTS  | NIOSH   |                       |          |                        | ACGIH       |                       | OSHA    |                       |
|-----------------------|---|-----------------------|----------|------------------------|-------------|-----------------------|---------|-----------------------|
|                       | TWA ppm   | TWA mg/m <sup>3</sup> | STEL ppm | STEL mg/m <sup>3</sup> | TLV/TWA ppm | TWA mg/m <sup>3</sup> | PEL ppm | PEL mg/m <sup>3</sup> |
| <b>Isobutane</b>      | 1000 ppm TWA as C1-C4 aliphatic gases (ACGIH), TWA 800 ppm (1900 mg/m <sup>3</sup> ) (NIOSH REL), 1000 ppm (2400 mg/m <sup>3</sup> ) MAK (DFG)  |                       |          |                        |             |                       |         |                       |
| <b>Isopropanol</b>    | 200 ppm TWA, 400 ppm STEL (ACGIH), 400 ppm (980 mg/m <sup>3</sup> ) (OSHA PEL, NIOSH REL), 500 ppm (1225 mg/m <sup>3</sup> ) (NIOSH STEL), 200 ppm (500 mg/m <sup>3</sup> ) MAK (DFG) |                       |          |                        |             |                       |         |                       |
| <b>Dye / Extender</b> | None Established or Reported  |                       |          |                        |             |                       |         |                       |

### PERSONAL PROTECTION

**RESPIRATORY PROTECTION:**

Respirators for organic vapors and dusts conforming to NIOSH/MSA or European EN-149 standards when organic vapors and dusts are generated by spraying this product in an enclosed area.

**PROTECTIVE GLOVES:**

Wear chemically resistant gloves - latex, nitrile, or neoprene gloves are acceptable.

**EYE PROTECTION:**

Wear properly fitted chemical safety glasses with side shields; safety goggles are also acceptable.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**

Wear a protective rubber or plastic apron, or alternatively, a protective suit, when using this product to prevent contamination of clothing.

**WORK / HYGIENIC PRACTICES:**

Wash hands and face after working with the substance. Wear Personal Protective Equipment at all times while working with product. Wash hands and face before eating, drinking or smoking. No eating, drinking, or smoking while using product!!!

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

|  |  |
|--|--|
| APPEARANCE AND ODOR<br><b>Aerosol powder (red) with slight odor.</b> | VAPOR PRESSURE<br><b>NR</b>                      |
| VOC <b>NR</b> Volatility <b>Aerosol</b>                              | SPECIFIC GRAVITY (WATER = 1)<br><b>NR</b>        |
| BOILING POINT / BOILING RANGE<br><b>NA- Aerosol.</b>                 | SOLUBILITY IN WATER<br><b>Slight Solubility</b>  |
| FLASH POINT<br><b>NA- Aerosol.</b>                                   | VISCOSITY<br><b>NR</b>                           |
| FLAMMABLE LIMITS<br>LEL: <b>NR</b> UEL: <b>NR</b>                    | VAPOR DENSITY (AIR = 1)<br><b>NR</b>             |
| AUTO-IGNITION TEMPERATURE<br><b>NR</b>                               | EVAPORATION RATE BUTYL ACETATE = 1)<br><b>NR</b> |

## SECTION 10 - STABILITY AND REACTIVITY

|  |   |
|--|---|
| STABILITY <b>STABLE</b> <b>X</b>   | CONDITIONS TO AVOID:<br><b>Avoid sources of ignition, open flame, contact with incompatible substances.</b> |
| INCOMPATIBILITY (MATERIALS TO AVOID):<br><b>Avoid contact with strong oxidizing agents, bases, amines and aldehydes.</b> |   |
| HAZARDOUS DECOMPOSITION OR BYPRODUCTS:<br><b>Carbon Monoxide, Carbon Dioxide. organic vapors.</b>                        |   |
| HAZARDOUS POLYMERIZATION:<br><b>Will not occur.</b>  | CONDITIONS TO AVOID:<br><b>None related to polymerization.</b>  |

## SECTION 11 - TOXICOLOGICAL INFORMATION

| Hazardous Components | CAS #<br>EINECS # | LD50 of Ingredient<br>(Specify Species and Route) | LC50 of Ingredient<br>(Specify Species)              |
|----------------------|-------------------|---|--|
| <b>Isobutane</b>     | <b>75-28-5</b>    | <b>NR</b>   | <b>57 pph / 15 Min<br/>(Inhalation, Rat)</b>         |
|                      | <b>200-857-2</b>  |   |  |
| <b>Isopropanol</b>   | <b>67-63-0</b>    | <b>5000 mg/kg<br/>(Oral, Rat)</b>                 | <b>72,600 mg/m<sup>3</sup><br/>(Inhalation, Rat)</b> |
|                      | <b>200-661-7</b>  |   |  |
| <b>Dye/ Extender</b> | <b>NR</b>         | <b>NR</b>   | <b>NR</b>  |
|                      | <b>NR</b>         |   |  |

## SECTION 12 - ECOLOGICAL INFORMATION

Slightly hazardous for water do not allow to enter drinking water supplies, other watercourses, sewers systems, groundwater, or soil. No ecological data specific to this blended product is available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD:  
Treat as hazardous waste to be disposed of by a licensed waste disposal facility in compliance with all local, state, and federal regulations. DO NOT INCINERATE THIS PRODUCT! DO NOT ALLOW THE CONTAMINATION OF DRINKING WATER, FOOD, OR FEEDSTUFFS.

## SECTION 14 - TRANSPORT INFORMATION

|  |   |
|--|---|
| PROPER SHIPPING NAME: <b>Aerosols, Flammable</b> |   |
| DOT HAZARD CLASS / Pack Group: <b>2.1</b>        | IATA HAZARD CLASS / Pack Group: <b>Aerosols, Flammable, n.o.s., 2.1 UN 1950, 75kg passenger, 150kg cargo max.</b> |
| REFERENCE: <b>49 CFR</b>                         | IMDG HAZARD CLASS: <b>Sea class 2, UN 1950, 2.1</b>   |
| UN / NA IDENTIFICATION: <b>UN 1950</b>           | RID/ADR Dangerous Goods Code: <b>UN 1950, 2.1</b>   |
| LABEL: <b>Flammable Gas</b>                      | UN TDG Class / Pack Group: <b>2.1/ Aerosols, Limited Quantities.</b>  |
| HAZARD SYMBOLS:                                  | Hazard Identification Number (HIN): <b>23</b>   |



Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

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## SECTION 15 - REGULATORY INFORMATION

|  |            |                             |            |
|--|------------|-----------------------------|------------|
| TSCA (USA - Toxic Substance Control Act):                            |            | <b>Ingredients listed.</b>  |            |
| SARA TITLE III (USA - Superfund Amendments and Reauthorization Act): |            |                             |            |
| Acute Health:  | <b>Yes</b> | Chronic Health:             | <b>Yes</b> |
| Fire:  | <b>Yes</b> | Sudden Release of Pressure: | <b>Yes</b> |
| Reactive:  | <b>No</b>  |                             |            |

|   |                                    |
|---|------------------------------------|
| <b>313 REPORTABLE INGREDIENTS:</b>  | <b>None reportable.</b>            |
| CERCLA (USA - Comprehensive Response Compensation and Liability Act):           | <b>No RQ's applicable.</b>         |
| California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986:      | <b>No Components Listed.</b>       |
| CCPR (Canadian Controlled Products Regulations):                                | <b>Not listed.</b>                 |
| CIDL (Canadian Ingredient Disclosure List):                                     | <b>Isopropanol is on the CIDL.</b> |
| CDSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): | <b>Listed on CDSL.</b>             |
| EINECS (European Inventory of Existing Commercial Chemical Substances):         | <b>Referenced.</b>                 |

WGK Water Quality Index: **2**

| RISK PHRASES:   | SYMBOL(S) REQUIRED FOR EU LABEL  | SAFETY PHRASES:   |
|---|--|---|
| <b>R12 Extremely flammable.</b><br><b>R36/37/38 Irritating to eyes, respiratory system and skin.</b><br><b>R67 Vapors may cause drowsiness and dizziness.</b> | <br><b>F - Flammable</b><br><br><br><b>Xn - Harmful</b> | <b>S2: Keep out of the reach of children.</b><br><b>S3/9/14 Keep in a cool, well-ventilated place away from strong oxidizing agents, bases, amines and aldehydes.</b><br><b>S16: Keep away from sources of ignition-No smoking.</b><br><b>S20/21 When using do not eat, drink or smoke.</b><br><b>S23: Do not breathe spray, vapors, or dusts.</b><br><b>S24/25 Avoid contact with skin and eyes.</b><br><b>S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</b><br><b>S37/39 Wear suitable gloves and eye/face protection.</b><br><b>S51 Use only in well-ventilated areas.</b> |

## SECTION 16 - OTHER INFORMATION

|  |                                       |          |  |
|--|---------------------------------------|----------|--|
| <b>Legend - N/A = Not Applicable N/D = Not Determined N/E = Not Established N/R = Not Reported</b> |                                       |          |  |
| <b>HMIS HAZARD RATINGS</b>   | <b>HEALTH:</b>                        | <b>2</b> |  |
| <b>0 = INSIGNIFICANT, 1 = SLIGHT</b>   | <b>FLAMMABILITY:</b>                  | <b>4</b> |  |
| <b>2 = MODERATE, 3 = HIGH</b>  | <b>PHYSICAL HAZARD:</b>               | <b>0</b> |  |
| <b>4 = EXTREME</b>   | <b>PERSONAL PROTECTIVE EQUIPMENT:</b> | <b>I</b> |  |

REVISION SUMMARY: Revised Issue to E.U. protocols 8/1/2011 supersedes 9/30/2009 issue. LB/JTV

|  |  |
|--|--|
| <b>MSDS Prepared by:</b><br>ChemTel Inc.<br>1305 North Florida Avenue<br>Tampa, Florida USA 33602-2902<br>Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573<br>Website: www.chemtelinc.com |  |
|--|--|

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.