2732 Kuser Road Hamilton, NJ 08691 Effective Date: June 1, 2015

Safety Data Sheet

Section 1. Identification

Product name:	L-W Stain, Tetrachloroethane Formula
Product codes:	2001-05, 2001-25, 2002-05, 2002-25
General Use:	Scientific Stain
Responsible Party:	Weber Scientific Inc. 2732 Kuser Rd Hamilton NJ 08691 609-584-7677
Emergency:	**Chem-Tel 800-255-3924** **Outside USA: 813-248-0585**

Section 2. Hazards Identification

Blue/purple liquid, characteristic chloroform-like odor

GHS Classifications:	Acute-Toxicity-Oral	3
	Acute-Toxicity-Dermal	1
	Acute-Toxicity-Inhalation	2
	Skin-Corrosion-Irritation	2
	Eye-Damage-Irritation	1
	Respiratory-Sensitizer	1
	Germ-Cell-Mutagenicity	1
	Carcinogenicity	2
	Reproductive-Toxicity	1
	Target-Organs-Single-Exposure	1
	Target-Organs-Repeated-Exposure	1
	Flammable-Liquids	2
	Aquatic-Environment-Acute	2
	Aquatic-Environment-Chronic	2

Danger

Hazard Statements:

Highly flammable liquid and vapor. Toxic if swallowed. Fatal in contact with skin. Causes skin irritation. Causes serious eye damage. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause genetic defects. Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fumes or mist. Do not get in eyes, on skin, or on clothing. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment is urgent (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Take off contaminated clothing and wash it before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Section 3. Composition/Information on Ingredients

Hazardous components	CAS #	% by weight	OSHA PEL	ACGIH TWA	Title III
Denatured ethanol (CH_3CH_2CH)	64-17-5	40-70	1000 ppm	1000 ppm	
1,1,2,2-Tetrachloroethane (Halogenated Hydrocarbon) ($Cl\ CH_2CCl_3$) (a,b,c,d,e,f)	79-34-5	30-60	8 ppm	1 ppm	yes
Glacial Acetic Acid (c) ($CH_3\ COOH$)	64-19-7	3-7	10 ppm	10 ppm	
Methyl Alcohol (a,b,c) ($CH_3\ OH$)	67-56-1	1-5	200 ppm	200 ppm	yes

(a,c) See Section 15
(b) Indicated that the Resource Conversation and Recovery Act (RCRA) has determined the waste for this chemical is listed as hazardous and must be handled according to regulations in 40 CFR 260-281.
(d) Indicates substance appears on National Toxicology Program (NTP) list of carcinogens, International Agency for Research on Cancer (IARC) list if carcinogens or is regulated by the Occupational Safety and Health Administration (OSHA) as a possible carcinogen.
(e) California Prop. 65. Safe Drinking Water and Toxic Enforcement Act of 1986, chemicals known to the state to cause cancer or reproductive toxicity. A person in the course of doing business must warn others who may consume or come into contact with, or otherwise be exposed to this chemical.
(f) Product is listed or defined as a marine pollutant in IMDG Code or 49 CFR 172.101 Appendix B. List of Marine Pollutants and must be classified as an Environmentally Hazardous Substance, Class 9, in addition to any other defined hazards for this product.

Section 4- First Aid Measures

INHALATION: Remove affected person to fresh air, provide oxygen if breathing is difficult, if affected person is not breathing administer CPR, do not use mouth-to-mouth resuscitation, seek emergency medical attention.
SKIN: Remove contaminated clothing, wash affected area with soap and water, launder contaminated clothing before reuse, if irritation persists seek medical attention.
EYES: Remove contact lenses, flush eyes with clear running water for 15 minutes while holding eyelids open, if irritation persists seek immediate medical attention.
INGESTION: If conscious drink large amounts of water. DO NOT induce vomiting. Take affected person immediately to a hospital, do not give anything by mouth to an unconscious person.

Section 5- Fire Fighting Measures

EXTINGUISHING MEDIA: Carbon dioxide, water, water fog, dry chemical, chemical foam. Water in straight hose stream should be avoided as it can scatter and spread existing burning liquid.
HAZARDOUS COMBUSTION PRODUCTS: In case of a fire, phosgene, chloride, oxides or carbon, hydrocarbons, fumes and toxic smoke may be produced.
FIRE FIGHTING PROCEDURES: Self-contained respiratory equipment, cool containers to prevent build-up and possible explosion when exposed to extreme heat. CAUTION- MATERIAL IS FLAMMABLE !

FLASH POINT (METHOD USED): 48°F (Closed Cup)
FLAMMABLE LIMITS: LEL 4.3%; UEL 19.0%
AUTOIGNITION TEMPERATURE: not determined NFPA Class: IB
GENERAL HAZARDS: Products of combustion include compounds of carbon, chlorine, hydrogen and oxygen, including carbon monoxide and phosgene. Toxic gases will form upon combustion.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers can explode due to build-up of pressure when exposed to extreme heat

Section 6- Accidental Release Measures

PERSONAL PROTECTION: All persons dealing with clean-up should wear appropriate equipment. See sections 7 and 8.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Evacuate and ventilate area, confine and absorb into inert absorbent (vermiculite, dry sand, earth, DO NOT use combustible materials like sawdust); do not flush to sewer, place material into approved containers for disposal; for spills in excess of allowable limits (RQ) notify the National Response Center (800-424-8802); refer to CERCLA 40 CFR 302 and SARA Title III, Section 313.40 40 CFR 372 for detailed instructions concerning reporting requirements. DO NOT enter low-lying areas without self-contained breathing apparatus where vapors may be present. Inhalation could be fatal.

Section 7- Handling and Storage

PRECAUTIONS TO BE TAKEN IN HANDLING:

CAUTION FLAMMABLE- keep away from all sources of ignition.
Use non-sparking tools when opening and closing containers.
Maintain well ventilated work areas to minimize exposure when handling this material.
Avoid inhaling concentrated fumes or vapors.

PRECAUTIONS TO BE TAKEN IN STORAGE:

Keep container closed when not in use; protect containers from abuse and extreme temperatures.
"Empty" containers may contain residue which may form explosive vapors.
Do not weld or cut near empty container that has not been professionally reconditioned.

Section 8- Exposure Controls/Personal Protection

Hazardous components	CAS #	% by weight	OSHA PEL	ACGIH TWA
Denatured ethanol (CH_3CH_2CH)	64-17-5	40-70	1000 ppm	1000 ppm
1,1,2,2-Tetrachloroethane (Halogenated Hydrocarbon) (Cl CH_2CCl_3)	79-34-5	30-60	8 ppm	1 ppm
Glacial Acetic Acid (CH_3 COOH)	64-19-7	3-7	10 ppm	10 ppm
Methyl Alcohol (CH_3 OH)	67-56-1	1-5	200 ppm	200 ppm

ENGINEERING CONTROLS:
The use of local exhaust ventilation is recommended to control emissions near the source. Provide Self-contained Breathing Apparatus for workers entering confined spaces. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment. See Section 2 for component exposure guidelines.

PERSONAL PROTECTION:
RESPIRATORY PROTECTION: None required while threshold limits (Section 2) are kept below maximum allowable concentrations: if TWA exceeds limits NIOSH approved respirator must be worn. Refer to 29 CFR 1910.134 or European Standard EN 149 for complete regulations. DO NOT enter low-lying areas without self-contained breathing apparatus.
PROTECTIVE GLOVES: neoprene or rubber gloves with cuffs to prevent skin contact
EYE PROTECTION: Safety goggles with side shields
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Chemical impervious apron, safety eyebath nearby.
WORK/ HYGIENIC PRACTICES: Practice safe workplace habits. Minimize body contact with this as well as all chemicals in general

Section 9- Physical and Chemical Properties

BOILING POINT: 173 °F
VAPOR DENSITY: (air = 1): 5.8
VISCOSITY: similar to water
FREEZING POINT: not determined
pH: < 2.0

VAPOR PRESSURE @ 68°F: 44 mm Hg
SOLUBILITY IN WATER: complete
EVAPORATION RATE (n-butyl acetate =1): 3.6
PHYSICAL STATE: liquid

VOLATILE ORGANIC CMPDS (total VOCs): 8.97 lbs/gal

Section 10- Stability and Reactivity

STABILITY: Stable
INCOMPATABILITY (materials to avoid): strong oxidizers, strong acids, Sodium and Potassium or their alloys
CONDITIONS TO AVOID: extreme temps, open flames,sparks
HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Decomposition will not occur if handled and stored properly, in case of fire, phosgene, chlorides, oxides of carbon, hydrocarbons, fumes and toxic smoke may be produced.
HAZARDOUS POLYMERIZATION: will not occur

Section 11- Toxicological Information

Hazardous components	CAS #	% by weight	LD_{50} species	LCD_{50} species
Denatured ethanol (CH_3CH_2CH)	64-17-5	40-70	3450 mg/kg oral-mouse	20,000 ppm/10 hr inhalation-rat
1,1,2,2-Tetrachloroethane (Halogenated Hydrocarbon) ($Cl\ CH_2CCl_3$)	79-34-5	30-60	800 mg/kg oral-rat	4500 mg/m3/1 hr inhalation-mouse
Glacial Acetic Acid ($CH_3\ COOH$)	64-19-7	3-7	3310 mg/kg oral-rat	5620 ppm/I hr inhalation-mouse
Methyl Alcohol ($CH_3\ OH$)	67-56-1	1-5	9100 mg/kg oral-rat	145,000 ppm/ 4 hr inhalation-rat

Section 12- Ecological Information

No data are available on the adverse effects of this material on the environment. Neither COD or BOD data are available. Based on the chemical composition of this product it is assumed that the mixture can be treated in an acclimatized biological waste treatment plant system in limited quantities. However, such treatment should be evaluated and approved for each specific biological system. 1,1,2,2- tetrachloroethane, an ingredient in this mixture, is classified as a Marine Pollutant with a half-life of 10 and 30 days when released into water. May be toxic to aquatic life: the LCD /96 hr values for fish are between 10 and 100 mg/L

Section 13- Disposal Considerations

WASTE DISPOSAL METHOD: Dispose of in accordance to Local, State and Federal Regulations. This product may produce concentrated hazardous vapors or fumes in a disposal container creating a dangerous environment. Refer to "40 CFR Protection of the Environment Parts 260-299" for complete waste disposal regulations for ignitable materials. Consult your local, state or federal Environmental Protection Agency before disposing of any chemicals. DO NOT flush to sanitary sewer or waterway.

Section 14- Transport Information

IDENTIFICATION NUMBER: UN 1992
PROPER SHIPPING NAME: Flammable liquids, toxic, n.o.s. (ethanol, 1,1,2,2-tetrachlorethane)
HAZARD CLASS 3 (6.1) REFERENCE: 49 CFR 173.202, 243
IATA HAZARD CLASS/ pack group: 3 (6.1) / II
IMDG HAZARD CLASS: 3 (6,1)/ II
RID/ADR Dangerous Good Code: 3(6.1) / (15B)
Canadian TDG Class/Division: 3,2 (6.1)
HAZARD SYMBOLS: F. T
PACK GROUP: II

Note: Transportation information provided is for reference only. User is urged to consult CFR 49 parts 100-177 IMDG, IATA,EC, Canadian TDG and United Nations TDG information manuals for detailed regulations and exceptions covering specific sizes, packaging materials and methods of shipping.

Section 15- Regulatory Information

TSCA (Toxic Substance Control Act)
Components of this product are listed on the TSCA Inventory
SARA Title III (Superfund Amendments and Reauthorization Act)
311/312 Hazard Categories : Acute health, flammable, skin irritant, eye irritant
313 Reportable Ingredients:
A "yes" in the SARA Title III column in Section 2 indicates a toxic chemical subject to annual reporting of Section 313 of the Emergency Planning and Community Right-To-Know of 1986 and of 40 CFR 372.
CERCLA (Comprehensive Response Compensation and Liability Act)
The CERCLA has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ for this mixture = 200 lbs) or greater amounts according to 40 CFR 302
CPR (Canadian Controlled Products Regulations)
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
IDL (Canadian Ingredient Disclosure List)
Components of this product listed on the Canadian Ingredient Disclosure List are shown in Section 2.
EINECS (European Inventory of Existing Commercial Chemical Substances)
Components of this product are on the European Inventory of Existing Commercial Chemical Substances

Section 16- Other Information

Prepared by: Fred Weber
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