

# Safety Data Sheet

## Section 1 - Chemical Product and Company Identification

**Product Name:** Orange Solvent

**Company Identification:**

Reliance Dental Mfg., Co.

5805 W. 117<sup>th</sup> Place

P.O. Box 38

Worth, IL 60482

**For Product Information, call:** 708-597-6694 **For Medical Information, call:** 800-535-5053

## Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
94266-47-4	Citrus Terpenes	100

## Section 3 - Hazards Identification

### EMERGENCY OVERVIEW

**Appearance/Odor:** Colorless to pale yellow liquid with citrus odor.

Product is Combustible. Slippery when spilled.

**Potential Health Effects:** See Section 11 for more information.

**Likely Routes of Exposure:** Eye contact, skin contact, inhalation.

**Eye:** Causes moderate to severe irritation.

**Skin:** May cause slight redness. Prolonged or repeated exposure may cause drying of the skin.

**Inhalation:** May cause nose, throat and respiratory irritation, coughing, headache.

**Ingestion:** Not likely to be toxic, but, may cause vomiting, headache or other medical problems.

**Medical Conditions Aggravated by Exposure:** May irritate the skin of people with pre-existing skin conditions.

This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC, ACGIH or NTP.

**OSHA Regulatory Status:** This material is combustible, which is defined as having a flash point between 100°F (37.8°C) and 200°F (93.3°C). Combustible materials are hazardous according to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Section 4 - First Aid Measures

**Eyes:** Remove contact lenses at once. Flush with water for at least 15 minutes. If irritation persists, seek medical attention.

**Skin:** Wash affected area with copious amounts of soap and water. If irritation develops, seek medical attention.

**Ingestion:** Seek medical attention immediately. DO NOT induce vomiting. Rinse mouth with water. DO NOT administer anything by mouth to an unconscious person. DO NOT leave victim unattended.

**Inhalation:** If symptoms of overexposure are experienced, move to fresh air. If symptoms persist, seek medical attention.

**General:** As with any chemical, employees should thoroughly wash hands with soap and water after handling this material.

## Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media:** Carbon dioxide, foam or dry chemical. Caution: Carbon dioxide will displace air in confined spaces and may create an oxygen deficient atmosphere.

**Unsuitable Extinguishing Media:** Water

**Products of Combustion:** Forms acid fumes, carbon monoxide, and carbon dioxide.

**Protection of Firefighters:** Vapors may be irritating to eyes, skin and respiratory tract, Firefighters should wear self-contained breathing apparatus (SCBA) and full fire-fighting turnout gear.

## Section 6 - Accidental Release Measures

**Personal Precautions:** Use personal protection recommended in Section 8. Product is slippery when spilled. Isolate the hazard area. Deny entry to unnecessary and unprotected personnel.

**Environmental Precautions:** Keep out of drains, sewers, ditches and waterways.

**Methods of Containment:** Dike spill area and cap leaking containers as necessary to prevent further spreading of spilled material. Absorb spilled liquid with suitable materials such as dirt or sand.

**Methods for Clean Up:** Eliminate all ignition sources. Use equipment rated for use around combustible materials. Oil soaked rags may spontaneously combust. Place in appropriate disposal container.

**Other Information:** There are no special reporting requirements for spills of this liquid.

## Section 7 - Handling and Storage

**Handling:** Keep away from heat, sparks and flame. Open container slowly to release pressure caused by temperature variations. Do not allow this materials to come in contact with eyes. Avoid prolonged contact with skin. Use in well-ventilated areas. Do not breathe vapors. Drum lining may occasionally chip and fall to the bottom of container. Product should be filtered or strained before blending or repackaging. As with any chemical employees should thoroughly wash hands with soap and water after handling this material.

**Storage:** Product may be packaged in phenolic-lined steel containers or fluorinated plastic containers. Store in a well ventilated area with proper sprinkler/fire deterrent system. Storage temperature should not exceed the flash point for extended periods of time. Keep container closed with not in use. Air should be excluded from partially filled containers by displacing with nitrogen or carbon dioxide. Do not cut, drill, grind or weld on or near this container. Residual vapor may ignite.

## Section 8 - Exposure Controls, Personal Protection

### Exposure Guidelines

Citrus Terpenes 8h TWA-30 ppm (AIHA Standard)

TWA = Time Weighted Average

**Engineering Controls:** provide ventilation. Keep away from sparks and flames.

**Eye/Face Protection:** Wear safety glasses or goggles.

**Skin Protection:** Nitrile gloves are recommended. Boots, apron, or bodysuit should be worn as necessary.

**Respiratory Protection:** Not normally required. If adequate ventilation is available, use NIOSH approved air-purifying respirator with organic vapor cartridge or canister.

**General Hygiene Considerations:** Wash hands thoroughly after handling. Have eyewash and emergency shower facilities immediately available. Launder contaminated clothing before reuse.

## Section 9 - Physical and Chemical Properties

**Color:** Colorless to pale yellow. **Odor:** Citrus aroma. **Physical State:** Liquid  
**Boiling Point:** 349°F(176°C) **Melting Point:** -140°F(-96°C), thickens at -108°F(-78°C)  
**Specific Gravity:** 0.838 to 0.843 @ 77°F(25°C) **Refractive Index:** 1.471 to 1.474 @ 68°F(20°C)  
**Optical Rotation:** +96° to 104° @ 77°F (25°C) **Vapor Pressure:** <2mmHg @ 68°F(20°C)  
**Flash Point(CCCFP):** >110°F (43°C) **Flammable Limits:** LEL approx. 0.7%, UEL approx. 6.1%  
**Autoignition Temperature:** 458°F (237°C) **Solubility in Water:** Insoluble  
**Evaporation Rate:** 0.2(BuAc=1) **Volatile Organic Compound (VOC) Content:** >95% by volume.

**Note:** These specifications represent a typical sample of this product, but actual values may vary. Certificates of Analysis and Specification Sheets are available upon request.

## Section 10 - Stability and Reactivity

**Stability:** Stable.

**Conditions to Avoid:** Keep away from heat, sparks and flames.

**Incompatible Materials:** Strong oxidizing agents and strong acids, including acidic clays, peroxides, halogens, vinyl chloride, and iodine pent fluoride.

**Hazardous Decomposition Products:** Oxides of citrus terpenes, which can result from improper storage and handling, are known to cause skin sensitization

**Possibility of Hazardous Reactions:** To prevent oxidation, avoid long-term exposure to air. If storing partially filled container, fill headspace with an inert gas such as nitrogen or carbon dioxide.

## Section 11 - Toxicological Information

**Acute Effects:** Citrus terpenes have been shown to have low oral toxicity (LD50>5 g/kg) and low dermal toxicity (LD50>5g/kg) when tested on rabbits. Citrus terpenes also showed low toxicity by inhalation (RD50>1 g/kg) when tested on mice. The skin irritancy of limonene in guinea pigs and rabbits is considered moderate and low, respectively. Inhalation may cause irritation of the nose, throat, and respiratory tract.

**Chronic Effects:** This product is not classified as a carcinogen by OSHA, IARC, ACGIH or NTP. This product has not been shown to produce genetic changes when tested on bacterial or animal cells. This product does not contain known reproductive or developmental toxins. Prolonged or repeated exposure can cause drying or dermatitis of skin. Improper storage and handling may lead to the formation of a possible skin sensitizer.

## Section 12 - Ecological Information

**Ecotoxicity:** There is no information available at this time for this product. However, a spill may produce significant toxicity to aquatic organism and ecosystems. Some studies have shown that certain bacteria and fungi have the ability to degrade terpenes, decreasing their toxicity to fish. When spilled, this product may act like oil, causing a film, sheen, emulsion or sludge at or beneath the surface of a body of water.

**Persistence/Degradability:** Product is expected to be readily biodegradable.

**Bioaccumulation/Accumulation:** No appreciable bioconcentration is expected in the environment.

**Mobility in Environment:** Citrus terpenes volatilize rapidly. .

## Section 13 - Disposal Considerations

**Disposal:** Incinerate or dispose of in accordance with Local, State, and Federal Regulations. Taking regulations into consideration, waste may be incinerated or handled through EPA Spill Control Plan via landfill or dilution. Commercially clean containers prior to disposal. Oil soaked rags should be disposed of properly to prevent spontaneous combustion.

## Section 14 - Transport Information

### US DOT Shipping Classifications

**Proper Shipping Name:** Combustible Liquid N.O.S.

**Hazard Class:** Combustible Liquid N.O.S.

**Identification No.:** NA 1983

**Packing Group:** III

**Label/Placard:**

**TDG Status:**

**IMO Status:**

**IATA Status:**

The listed transportation classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptions.

## Section 15 - Regulatory Information

### Global Inventories

This product is included in the following inventories:

USA (TSCA)<sup>1,2,3</sup>

Canada (DSL)<sup>1,2,3</sup>

Europe (EINECS/ELINCS/Polymer/NLP)<sup>4</sup>

Australia (AICS)<sup>1,2</sup>

Korea (KECL)<sup>1,2,3</sup>

Philippines (PICCS)

Japan (ENCS)<sup>1</sup>

<sup>1</sup> Listed as CAS 5989-27-5(d-Limonene)

<sup>2</sup> Listed as CAS 68647-72-3 (Terpenes and Terpenoids, sweet orange-oil)

<sup>3</sup> Listed as CAS 68608-34-4 (Terpenes and Terpenoids, citrus-oil)

<sup>4</sup> Listed as CAS 8028-48-6 (Orange, ext.)

The United States FDA lists d-limonene as GRAS in 21 CFR sections 182.20 and 182.6.

d-Limonene is a 100% natural, biodegradable product extracted from the peel of citrus fruit.

### **Proposition 65: California Safe Drinking Water and Toxic Enforcement Act of 1986**

This product is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

### **SARA Title III (Section 313)**

This substance contains no materials subject to the reporting requirements of SARA Title III (Section 313).

## Section 16 - Additional Information

### **NFPA 704: National Fire Protection Association**

Health - 1 (slight hazard)

Fire - 2 (moderate hazard)

Reactivity - 0 (minimal hazard)

d-Limonene is the major component of citrus terpenes, with the balance consisting of other terpene hydrocarbons and oxygenated compounds - octanal, myrcene, alpha-pinene, linalool predominant. D-Limonene is a by-product of citrus, entirely of natural origin and to the best of our knowledge contains no artificial flavors, sulfites, nitrites, or pesticide residue exceeding tolerances established by the FDA. D-Limonene does NOT contain lead, cadmium, mercury, or hexavalent chromium or come in contact with these chemicals since it is an citrus derived essential oil produced by steam/vacuum distillation. Further, d-Limonene is packaged in food grade containers with inert liners that do not contain lead, cadmium, mercury, or hexavalent chromium. D-Limonene does NOT contain and is NOT manufactured with any of the Class I or II ozone-depleting substances listed under the United States Clean Air Act of 1990.

### **Legend**

**ACIGH** - American Conference of Government Industrial Hygienists

**AIHA** - American Industrial Hygiene Association

**EPA** - United States Environmental Protection Agency

**FDA** - United States Food and Drug Association

**GRAS** - Generally Recognized as Safe

**IARC** - International Agency for Research on Cancer

**NIOSH** - National Institute for Occupational Safety and Health

**NTP** - National Toxicology Program

**OSHA** - United States Occupational Health and Safety Administration

**Caution:** The user should conduct his/her own experiments and establish proper procedures and control before attempting use on critical parts.

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Reliance Dental Mfg. Co. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*