



## Material Safety Data Sheet

**Date of Preparation:** June 17, 2013

### Section 1 – Chemical Product and Company Identification

**Product Name:** Cliplight FLASH

**Part Numbers:** 980, 98181KIT, 98381KIT

**Product Class:** Refrigeration additive

**Manufacturer:** Cliplight Manufacturing

961 Alness Street

Toronto, ON M3J 2J1, Canada

**Telephone:** +1 416 736 9036 **Emergency Telephone:** +1 416 736 9036

### Section 2 – Composition/ Information on Ingredients

| Ingredient Name      | CAS No.  | EC No.    | Composition, wt% |
|----------------------|----------|-----------|------------------|
| Triethylorthoformate | 122-51-0 | 204-550-4 | 50               |

### Section 3 – Hazards Identification

**Primary Entry Routes:** Inhalation, ingestion, skin, and eye

**Effects of Overexposure:**

**Swallowing:** May be harmful if swallowed. Can cause headache, dizziness, nausea, diarrhea, and abdominal upset.

**Inhalation:** Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.

**Eye Contact:** Causes eye irritation.

See Section 15 for risk and safety phrases.

### Section 4 – Emergency and First Aid Procedures

**Inhalation:** Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

**Eye Contact:** Immediately flush eyes with copious amounts of water for at least 15 minutes. Obtain medical attention.

**Skin Contact:** Immediately wash skin with soap and copious amounts of water.

**Ingestion:** Wash out mouth with water provided person is conscious. Do not induce vomiting. Get immediate medical attention.

**NOTE TO PHYSICIAN:** Treatment should be directed at preventing absorption, administering to the symptoms as they occur, and providing supportive therapy.

### Section 5 – Fire Fighting Measures

**Flash Point:** 35°C

**Flash Point Method:** Pensky-Martens Closed Cup

**Autoignition Temperature:** N/A

**Extinguishing Media:** DO NOT USE WATER. Use carbon dioxide, dry chemical powder, or appropriate foam.

**Special Protective Equipment:** Self-contained breathing apparatus and protective clothing.

**Unusual Fire or Explosion Hazards:** Under fire conditions, material may decompose to form flammable and/or explosive mixtures in air. Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

### Section 6 – Spill, Leak, and Disposal Procedures

Shut off all sources of ignition. Wear chemical-resistant gloves and chemical safety goggles. Cover spill with dry lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

**Disposal Methods:** In its original unused form, dispose of this product in accordance with all government requirements. Be sure to contact appropriate government environmental agencies if further disposal guidance is required. Based upon environmental acceptability product should be either incinerated at an authorized facility or treated at a waste treatment facility.

## Section 7 – Handling and Storage

**Handling:** Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Use spark-proof tools.

**Storage:** Keep container closed. Keep away from heat, sparks, and open flame. Store in a cool dry area. This product is sensitive to moisture. All hazard precautions given in this data sheet must be observed for empty containers.

## Section 8 – Exposure Controls / Personal Protection

**Protective Equipment:** Use protective gloves. Use eye protection and chemical protective clothing.

**Engineering Controls:** Have eye bath and safety shower available. Use non-sparking tools.

**General:** Wash thoroughly after handling. Wash contaminated clothing before re-use.

## Section 9 – Physical and Chemical Properties

**Flash Point:** 35°C

**Physical State:** Clear liquid

**Appearance/Odor:** Amber)

**% Volatile:** N/A

**Evaporation Rate:** N/A

**Autoignition Temperature:** N/A

**Boiling Range:** N/A

**Vapor Density:** N/A

**Specific Gravity (@ 20°C):** 0.95

**Vapor Pressure: (mm Hg@ 20°C):** N/A

## Section 10 – Stability and Reactivity

**Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, amines.

**Incompatibilities & Conditions to Avoid:** Moisture, acids, strong oxidizing agents.

## Section 11– Toxicological Information

See section 3 for routes of exposure and health effects.

The chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

### Triethylorthoformate Toxicity Data:

Oral, Rat: 7060 mg/kg, LD50

Skin, Rabbit: 20 mL/kg, LD50

Skin, Guinea pig: >10 mL/kg, LD50

Irritation Data, Skin, Rabbit, 500 mg, 24h

Remarks: Mild irritation effect

## Section 12– Ecological Information

No data available.

## Section 13– Product Disposal

See section 6.

In its original unused form, dispose of this product in accordance with all government requirements. Be sure to contact appropriate government environmental agencies if further disposal guidance is required. Based upon environmental acceptability product should be either incinerated at an authorized facility or treated at a waste treatment facility.

## Section 14 –Transport Information

### **IMDG/IACO/IATA/DOT/TDG:**

Shipping Name: FLAMMABLE LIQUID, N.O.S. (Triethyl orthoformate)

UN #: 2524

Class: 3

Packing Group: III

## Section 15 –Regulatory Information

**Hazard Symbol:** Xi: Irritant

**Risk Phrases:** R10 – Flammable  
R36 – Irritating to eyes

**Safety Phrases:** S16: Keep away from sources of ignition – no smoking.  
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

## Section 16 –Other Information

**Risk Phrases:** R10 – Flammable  
R36– Irritating to eyes, respiratory system and skin

All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.