

## MATERIAL SAFETY DATA SHEET

### SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** thermoglow™ 2hr Wick Chafing Fuel - 00622  
 thermoglow™ 4hr Wick Chafing Fuel - 00624  
 thermoglow™ 6hr Wick Chafing Fuel - 00626

**PRODUCT USES:** Fuel is delivered by a wick, is ignited and burned to provide heat for keeping food warm.

**MANUFACTURER:** Neo-Image Candlelight Ltd.  
 1331 Blundell Road., Mississauga, ON, L4Y 1M6, Canada

**EMERGENCY PHONE NUMBERS:** 1-800-375-8023 (8:30 am to 3:30 pm EST)

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### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

| HAZARDOUS COMPONENTS | WT % | CAS#     | OSHA PEL TWA | ACGIH TLV                        |
|----------------------|------|----------|--------------|----------------------------------|
| Diethylene Glycol    | 99   | 111-46-6 | Not listed   | 10 mg/m <sup>3</sup> or 2.26 ppm |

**TOXICOLOGICAL DATA ON INGREDIENTS:** Diethylene Glycol: ORAL (LD50): Acute: 12,565 mg/kg [Rat]. DERMAL (LD50): Acute: 12,510 mg/kg [Rabbit]. VAPOR (LC50): Acute: 9,970 ppm/4 hour [Rat].

### SECTION 3 – HAZARDS IDENTIFICATION

**ROUTES OF ENTRY:** Inhalation? Yes      Eye Contact? Yes      Skin Contact? Yes      Ingestion? Yes

**INHALATION:** Short term harmful health effects are not expected at ambient temperatures. Vapor or mist from heated material may cause adverse effects. Without adequate ventilation, inhalation of fumes formed when the product is burned can be dangerous and harmful. Carbon dioxide and carbon monoxide gasses are formed upon burning and can reach dangerous levels in enclosed or poorly ventilated areas.

**EYE CONTACT:** No evidence of harmful effects. May cause irritation.

**SKIN CONTACT:** May be mildly irritating on prolonged or repeated exposure.

**INGESTION:** Harmful or fatal if swallowed. The substance may cause effects on the kidneys, resulting in kidney impairment. The substance may cause effects on the central nervous system and liver by ingestion. May cause abdominal pain, nausea, dizziness, drowsiness and unconsciousness.

**CARCINOGENICITY:** Not listed by IARC, NTP, ACGIH, or OSHA as a carcinogen.

**MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE:** Overexposure is unlikely to aggravate existing medical conditions. Repeated excessive exposure may aggravate pre-existing liver and kidney disease.

### SECTION 4 – FIRST AID MEASURES

**INHALATION:** Move to fresh air. If breathing is difficult, call a physician immediately.

**EYES:** Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes. If irritation persists, get medical attention..

**SKIN:** Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes. Wash contaminated clothing before re-use.

**INGESTION:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

## SECTION 5 – FIRE FIGHTING MEASURES

**FLAMMABILITY:** May be combustible at high temperature.

**FLASHPOINT:** 120°C (248°F)

**FLAMMABLE LIMITS:** LOWER 2.1% UPPER 12.3%

**AUTO IGNITION TEMP:** 224°C (435°F)

**NFPA RATING:** 1

**IMPACT SENSITIVITY:** Not sensitive

**SENSITIVITY TO STATIC DISCHARGE:** Not expected to be sensitive to static discharge.

**EXTINGUISHING MEDIA:** Water spray, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>) or dry chemical.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon oxides and other irritating fumes and smoke.

**SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:** Stop source of fuel. Shut off ignition sources. Keep exposed containers cool with water spray. Avoid breathing vapors. Self-contained breathing apparatus and protective fire fighting clothing should be worn when fighting chemical fires.

**TDG FLAMMABILITY CLASSIFICATION:** NA.

**OSHA FLAMMABILITY CLASS:** NA

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**SMALL SPILLS:** Eliminate all ignition sources. Provide adequate ventilation. Small spills can be soaked up with absorbent material, or flushed with water.

## SECTION 7 – HANDLING AND STORAGE

**HANDLING:** Avoid contact with skin and eyes. Do not ingest. Place can in fuel holder or under chafer before lighting. Burn can in a level upright position. Keep away from combustibles (e.g. paper plates and napkins). Keep away from children.

**STORAGE:** Store away from sources of heat or open flame. Store in a cool dry place (40 – 120°F or 4 – 49°C). Provide adequate ventilation in area of use. Keep container closed when not in use.

## SECTION 8 – EXPOSURE CONTROL & PERSONAL PROTECTION

**RESPIRATORY PROTECTION:** Not required unless exposed to high concentrations above approved guidelines

**EXPOSURE GUIDELINES:** Diethylene Glycol 99% ACGIH TLV = 10 mg/m<sup>3</sup> (TWA)

**VENTILATION:** Use in well ventilated area.

**PROTECTIVE GLOVES:** Under normal conditions of product use, no special protection for skin is required.

**EYE PROTECTION:** Under normal conditions of product use, no special protection for eyes is required.

**OTHER PROTECTIVE EQUIPMENT:** Clean work clothing.

**STORAGE & HANDLING PRECAUTIONS:** Provide adequate ventilation in area of use.

**OTHER PRECAUTIONS:** Keep out of reach of children.

## SECTION 9 – PHYSICAL AND CHEMICAL DATA

|   |  |  |                     |
|---|--|--|---------------------|
| <b>APPEARANCE AND ODOR:</b>                 | Colourless, slightly viscous liquid. Practically odorless. | <b>EVAPORATION RATE (Butyl Acetate=1):</b> | 0.001               |
| <b>ODOUR THRESHOLD (ppm):</b>               | Not available  | <b>VAPOR PRESSURE (mmHg)</b>               | <0.01 mmHg (m) 20°C |
| <b>SPECIFIC GRAVITY (H<sub>2</sub>O=1):</b> | 1.12   | <b>VAPOR DENSITY (air=1)</b>               | 3.7                 |
| <b>BOILING POINT:</b>                       | 245°C / 473°F  | <b>SOLUBILITY IN WATER:</b>                | 100%                |
| <b>FREEZING POINT:</b>                      | - 9°C / 16°F   | <b>pH:</b>                                 | 7                   |
| <b>PERCENT VOLATILE:</b>                    | N/A  | <b>% VOLATILES:</b>                        | N/A                 |

## SECTION 10 – STABILITY AND REACTIVITY

**STABILITY:** Stable under recommended storage conditions.

**CONDITIONS TO AVOID:** Heat, flames and sparks. Incompatible products.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide and carbon dioxide (CO<sub>2</sub>).

**INCOMPATIBILITY (Materials to avoid):** Avoid strong oxidizers, plastics, rubber and coatings.

## SECTION 11 – TOXICOLOGICAL INFORMATION

|   |           |
|---|-----------|
| <b>EFFECTS OF ACUTE EXPOSURE TO PRODUCT:</b>  | Section 3 |
| <b>EFFECTS OF CHRONIC EXPOSURE TO PRODUCT:</b>  | Section 3 |
| <b>EXPOSURE LIMITS:</b>   | Section 2 |
| <b>IRRITANCY OF PRODUCT:</b>  | Eye       |
| <b>SENSITISATION OF PRODUCT:</b>  | Section 3 |
| <b>CARCINOGENICITY:</b>   | Section 3 |
| <b>REPRODUCTIVE EFFECT:</b> No known effect in humans or animals.   |           |
| <b>MUTAGENICITY:</b> No known effect in humans or animals.  |           |
| <b>TERATOGENICITY:</b> Experimental long-term ingestion has produced renal stones & liver damage in rodents |           |

## SECTION 12 – ECOLOGICAL INFORMATION

**ECOTOXICITY:** This material is highly soluble in water. Laboratory toxicity tests indicate that is not significantly toxic to fish and aquatic invertebrates, although amphibians may be more sensitive. Wildlife species may be more susceptible since mammals and birds do not readily metabolize this material. The odor and flavor of this material may attract some wildlife and cause them to consume spilled material.

**ENVIRONMENTAL FATE:** This material will biodegrade relatively rapidly in both soil and water, and will not persist in the environment. Due care should be taken to avoid accidental releases to aquatic or terrestrial systems. Diethylene Glycol is highly soluble in water.

**BIOACCUMULATION:** Because of this material's high solubility and rapid biodegradability, it is unlikely that bioaccumulation will occur in aquatic or terrestrial systems. Models estimate that this material will preferentially partition to water versus air or soil.

**AQUATIC TOXICITY:** LC50 (Fish, 96hr) >32,000mg/kg (gambusia affinis), >10,000mg/kg (leuciscus idus, 48hr),  
 >5000mg/kg (carassius auratus, 24hr),  
 >10,000mg/kg (artemia salina), >10,000mg/kg (daphnia magna)  
 LC50 (Crustacea, 24hr) 29,228mg/l (photobacterium phosphoreum, 15min), 40,000mg/litre (mixed bacterial culture)  
 EC50 (Bacteria)

## SECTION 13 – DISPOSAL CONSIDERATION

Dispose of waste material according to local, provincial/state and federal regulations. Do not dump into sewers, any body of water, or onto the ground.

## SECTION 14 - TRANSPORTATION DATA

|   |                                  |
|---|----------------------------------|
| <b>CANADA TRANSPORTATION OF DANGEROUS GOODS (TDG):</b>                        | UN – not regulated for transport |
| <b>UNITED STATES DEPARTMENT OF TRANSPORT (49CFR)(DOT):</b><br>(Domestic Only) | Not regulated for transport      |

## SECTION 15 – REGULATORY INFORMATION

The 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 CPR. This MSDS is valid for three years.

### **CANADIAN FEDERAL REGULATIONS:**

**CEPA, DOMESTIC SUBSTANCES LIST:** Listed (Canadian Environmental Protection Act (CEPA))

**WHMIS CLASSIFICATION:** D1B (Toxic on ingestion)

### **UNITED STATES REGULATIONS:**

**OSHA:** This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**RCRA (40 CFR 261, Subpart D):** None of the OSHA regulated components in this product are listed as hazardous wastes under 40 CFR 261 (Subpart D).

**CLEAN WATER ACT:** None of the OSHA regulated components in this product are Section 311 listed chemicals.

**RA: Sections 301-304 (Threshold planning quantity - TPQ) 40 CFR 355:** No TPQ for any OSHA regulated component.

**Section 313 (Toxic chemical release reporting) 40 CFR 372:** The following chemicals must be reported under SARA 313: Not applicable to any OSHA regulated component.

**CERCLA: Section 102 (Reportable Quantity - RQ) 40 CFR 302:** No RQ for any OSHA regulated component.

**TSCA INVENTORY STATUS:** All components are on the U.S. EPA TSCA Inventory List.

**NFPA RATINGS (0-4):** Health: 1; Fire: 1; Reactivity: 0

**HMIS RATINGS (0-4):** Health: 2; Fire: 1; Reactivity: 0

## **SECTION 16 – OTHER INFORMATION**

The information contained herein is based on data considered accurate. No warranty is expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Neo-Image Candlelight Ltd. assumes no responsibility for personal injury or property damage to vendees or users or third parties, caused by the material. Such vendees or users assume all risks with the use of the material.