

MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION

Product Name: Northern Lights® Lamp Fuel
Chemical Name: Normal Paraffin
Chemical Family: Isoparaffinic Hydrocarbon
Product Description: Clear colorless liquid; mild hydrocarbon odor.

II. EMERGENCY INFORMATION

24 Hour Health Emergency (800) 726-2015
Telephone Numbers: (800) 977-8225
(978) 768-7984

Contact Address:
Northern Lights® Products Corp.
P.O. Box 220
197 Western Avenue
Essex, MA 01929

III. COMPOSITION/INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

| <u>Name</u> | <u>CAS#</u> | <u>Concentration*</u> |
|---------------------------------------------|-------------|-----------------------|
| Distillates (petroleum), hydrotreated light | 64742-47-8 | 100% |

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

IV. HAZARDS IDENTIFICATION

This material is considered to be hazardous according to OSHA 29CFR 1910.1200.

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Material can accumulate static charges which may cause an incendiary electrical discharge.

POTENTIAL HEALTH EFFECTS

Repeated exposure may cause skin dryness or cracking. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs.

Target Organs: Skin

NFPA Hazard ID: Health: 1 Flammability: 1 Reactivity: 0

HMIS Hazard ID: Health: 1 Flammability: 1 Reactivity: 0

V. FIRST AID MEASURES**Inhalation**

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

MATERIAL SAFETY DATA SHEET

VI. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >94C (200F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 4.9

Autoignition Temperature: >200°C (392°F)

VII. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

MATERIAL SAFETY DATA SHEET

VIII. STORAGE AND HANDLING

HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source).

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Transport Pressure: [Ambient]

Static Accumulator: This material is a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Tankers; Tank Trucks; Railcars; Barges; Drums

Suitable Materials and Coatings: Neoprene; Epoxies; Epoxy Phenolics; Polyamide; Polyethylene; Polypropylene; Polyester; Teflon; Carbon steel; Stainless steel

Unsuitable Materials and Coatings: Natural rubber; Ethylene-propylene-diene monomer (EPDM); Polystyrene; Butyl rubber

IX. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

| Source | Form | Limit / Standard | NOTE |
|---------------------------------------------|--------|------------------------------|--------------------|
| Distillates (petroleum), hydrotreated light | Vapor. | RCP - TWA 152 ppm 1200 mg/m3 | Total Hydrocarbons |

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

MATERIAL SAFETY DATA SHEET

IX. EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include: If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

X. PHYSICAL AND CHEMICAL PROPERTIES

GENERAL INFORMATION

Physical State: Liquid

Form: clear

Color: Colorless

Odor: Odorless

Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 C): 0.791

Density (at 15 oC): 788 kg/m³ (6.58 lbs/gal, 0.79 kg/dm³)

Flash Point [Method]: >94C (200F) [ASTM D-93]

Flammable Limits (Approximate volume % in air): LEL: 0.6 UEL: 4.9

Autoignition Temperature: >200°C (392°F)

Boiling Point / Range: 218C (424F) - 257C (495F)

Vapor Density (Air = 1): 6.5 at 101 kPa [Calculated]

Vapor Pressure: 0.012 kPa (0.09 mm Hg) at 20 C | 0.044 kPa (0.33 mm Hg) at 38C
| 0.137 kPa (1.03 mm Hg) at 55C

Evaporation Rate (N-Butyl Acetate = 1): < 0.01

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): N/D

Solubility in Water: Negligible

Viscosity: 2.57 cSt (2.57 mm²/sec) at 40 C | 3.57 cSt (3.57 mm²/sec) at 25C

Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: -77°C (-107°F)

Melting Point: N/D

Pour Point: -57°C (-71°F)

Molecular Weight: 188 [Calculated]

Hygroscopic: No

Coefficient of Thermal Expansion: 0.00074 V/VDEGC

Decomposition Temperature: N/D

MATERIAL SAFETY DATA SHEET

XI. STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

XII. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure

Conclusion / Remarks

Inhalation

Toxicity: Data available.
Irritation: Data available.

Minimally Toxic. Based on test data for structurally similar materials.
Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.

Ingestion

Toxicity: LD50 > 15000 mg/kg

Minimally Toxic. Based on test data for structurally similar materials.

Skin

Toxicity: LD50 > 3160 mg/kg

Minimally Toxic. Based on test data for structurally similar materials.

Irritation: Data available.

May dry the skin leading to discomfort and dermatitis. Based on test data for structurally similar materials.

Eye

Irritation: Data available.

May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC 3 = IARC 1 5 = IARC 2B
2 = NTP SUS 4 = IARC 2A 6 = OSHA CARC

MATERIAL SAFETY DATA SHEET

XIII. ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be readily biodegradable.

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Expected to degrade rapidly in air

XIV. DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

XV. TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

MATERIAL SAFETY DATA SHEET

XVI. REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>List Citations</u> |
|---------------------------------------------|-------------------|-----------------------|
| Distillates (petroleum), hydrotreated light | 64742-47-8 | 17, 18, 19 |

--REGULATORY LISTS SEARCHED--

| | | | |
|---------------|------------------|-------------------|-------------|
| 1 = ACGIH ALL | 6 = TSCA 5a2 | 11 = CA P65 REPRO | 16 = MN RTK |
| 2 = ACGIH A1 | 7 = TSCA 5e | 12 = CA RTK | 17 = NJ RTK |
| 3 = ACGIH A2 | 8 = TSCA 6 | 13 = IL RTK | 18 = PA RTK |
| 4 = OSHA Z | 9 = TSCA 12b | 14 = LA RTK | 19 = RI RTK |
| 5 = TSCA 4 | 10 = CA P65 CARC | 15 = MI 293 | |

Code key: CARC=Carcinogen; REPRO=Reproductive

XVII. OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

ISSUE DATE: January 7, 2010

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his or her own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.
