

# G.J. CHEMICAL COMPANY, INC. SAFETY DATA SHEET

## 1. PRODUCT IDENTIFIER

1.1 PRODUCT NAME: -----> **Heptane (Commercial and Reagent)**

PRODUCT NUMBER(S)-----> 175100, 175130

TRADE NAMES/SYNONYMS-----> Mixture of n-Heptane and Heptane isomers  
Heptanes, Petroleum Hydrocarbon Solvent  
Naphtha (petroleum), hydro-treated light

CAS-No: 64742-49-0

CHEMICAL FAMILY: Aliphatic Hydrocarbon

### 1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RECOMMENDED USE: Industrial: Use in cleaning agents, Use in coatings, Rubber production and processing, Intermediate, Use as a fuel, Distribution of substance, Manufacture of substances.

USES ADVISED AGAINST: No information available

### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: **G.J. CHEMICAL CO., INC.**

Address: **40 VERONICA AVENUE  
SOMERSET, NJ 08873**

Telephone: **1-973-589-1450**

Fax: **1-973-589-3072**

### 1.4 Emergency Telephone Number

Emergency Phone: **1-800-424-9300 (CHEMTREC)**

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225

Skin irritation (Category 2), H315

Specific target organ toxicity - single exposure (Category 3), Narcotic effects, H336

Aspiration Hazard (Category 1), H304

Acute aquatic toxicity (Category 2), H400

Chronic aquatic toxicity \*Category 1), H410

## 2.2 GHS Label elements, including precautionary statements



Signal word:            **DANGER**

### Hazard statement(s)

H225 Highly flammable liquid and vapor.  
H304 May be fatal if swallowed and enters airways.  
H315 Causes skin irritation.  
H336 May cause drowsiness or dizziness.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

### Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.

### Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P391 Collect spillage.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor may cause flash fire or explosion. Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation.

### 3. INGREDIENTS

#### 3.1 SUBSTANCE:

| Ingredient                                 | CAS No.                                                                                  | % by WT.<br>Range | CLASSIFICATION                                                                                                                                                                                                                                                                                         |
|--------------------------------------------|------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Naphtha Petroleum<br>Hydrotreated<br>Light | 64742-49-0<br>EC-No.265-151-9<br>Index-No.649-328-00-1<br>Reg.-No. 01-2119475133-43-XXXX | 90+               | Flammable liquids (Category 2), H225<br>Skin corrosion/irritation (Category 2), H315<br>STOT-SE (Category 3), Narcotic Effects,<br>H336<br>Aspiration hazard (Category 1), H304<br>Acute aquatic toxicity (Category 2), H400<br>Chronic aquatic toxicity (Category 2), H410                            |
| Components:                                |                                                                                          |                   |                                                                                                                                                                                                                                                                                                        |
| C7 –C8 Alkanes                             | mixture                                                                                  | 60-100            | Flammable liquids (Category 2), H225<br>Skin irritation (Category 2), H315<br>Aspiration hazard (Category 1), H304<br>STOT-SE (Category 3), Narcotic effects,<br>H336                                                                                                                                  |
| C7- C8 Cycloalkanes                        | mixture                                                                                  | 5-10              | Flammable liquids (Category 2), H225<br>Skin irritation (Category 2), H315<br>Aspiration hazard (Category 1), H304<br>STOT-SE (Category 3), Narcotic effects,<br>H336                                                                                                                                  |
| n-Heptane                                  | 142-82-5<br>EC-No.205-563-8<br>Index-No.601-008-00-2<br>Reg.-No. 01-2119457603-38-XXXX   | 25-40             | Flammable liquids (Category 2), H225<br>Skin irritation (Category 2), H315<br>Eye Irritation (Category 2A), H320<br>STOT-SE (Category 3) Narcotic effects,<br>H336<br>Aspiration Hazard (Category 1), H304<br>Acute aquatic toxicity (Category 1), H400<br>Chronic aquatic toxicity (Category 1), H410 |
| Methylcyclohexane                          | 108-87-2                                                                                 | <10               | Flammable liquids (Category 2), H225                                                                                                                                                                                                                                                                   |

EC-No.203-624-3  
Index-No.601-018-00-7  
Reg.-No. 01-2119556887-18-XXXX

| Skin irritation (Category 2), H315  
| Aspiration hazard (Category 1), H304  
| STOT-SE (Category 3), Narcotic effects,  
| H336  
| Acute aquatic toxicity (Category 2), H400  
| Chronic aquatic toxicity (Category 2), H410

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3.2 MIXTURE: Not applicable

#### **4. FIRST-AID MEASURES**

##### **4.1 DESCRIPTION OF FIRST AID MEASURES:**

###### **INHALATION: HEPTANES**

**\*\*FIRST AID- Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.**

###### **SKIN CONTACT: HEPTANES**

**\*\*FIRST AID- Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15-20 minutes). Get medical attention immediately.**

###### **EYE CONTACT: HEPTANES**

**\*\*FIRST AID- Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15-20 minutes). Remove contact lenses, if worn, after initial flush. Get medical attention immediately.**

###### **INGESTION: HEPTANES**

**\*\*FIRST AID- Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. If victim is drowsy or unconscious, place on the left side with head down. Immediately consult a physician or poison control center, treat symptomatically.**

#### **4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:**

**Eye:** Transient mild irritation including stinging, watering and redness;

**Skin:** Irritating depending on amount of material and speed of removal. Includes redness, burning and drying.

**Inhalation:** Mist or vapor can irritate the throat and lungs.

**Ingestion:** Can irritate mucous membranes of the mouth, throat and esophagus.

Symptoms include a burning sensation in the mouth and esophagus, nausea, vomiting, dizziness, drowsiness, loss of consciousness and delirium.

This material can be absorbed by the stomach and intestinal tract.

**Chronic:** Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding from the nose. Damage may occur to the kidney or liver.

**Medical Conditions Aggravated by Exposure:** Skin contact may aggravate an existing dermatitis and people with chronic respiratory conditions. Significant exposure may adversely affect people with pre-existing heart disorders making them more susceptible to irregular heart-beats. Disorders of the liver, kidneys, respiratory system may be aggravated.

**Target Organs:** Kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system, eye (lens or cornea).

#### **4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:**

**Note to physicians:** Exposure to high concentrations of this material may be associated with cardiac arrhythmias. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias. Other drugs with less arrhythmogenic potential should be considered. Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

### **5. FIRE FIGHTING MEASURES**

**Flash Point:** -9°C (15.8°F) (TCC)

**LEL %:**1.0 (V)

**Auto-ignition:** 246°C (474.8°F)

**UEL %:**6.7 (V)

**UNIFORM FIRE CODE:** Flammable Liquid Class IB

**5.1 SUITABLE EXTINGUISHING MEDIA:** Foam--> x CO2--> x Dry Chemical-->  
x

Water-fog--> x Other-->

**Unsuitable extinguishing media:** Do not use waterjet.

## **5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR**

**MIXTURE:** FIRE AND EXPLOSION HAZARD: DANGEROUS FIRE HAZARD WHEN EXPOSED TO HEAT OR FLAME. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL A CONSIDERABLE DISTANCE TO A SOURCE OF IGNITION AND FLASH BACK. VAPOR-AIR MIXTURES ARE EXPLOSIVE. Keep containers tightly closed. Flammable liquid; isolate from all sources of ignition. Closed containers may explode when exposed to extreme heat. Liquid floats on water.

**CONDITIONS OF FLAMMABILITY:** Flammable in the presence of a source of ignition when the temperature is above the flash point.

**HAZARDOUS COMBUSTION PRODUCTS:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, carbon oxides and other unidentified organic compounds evolve when this material undergoes combustion.

**5.3 ADVICE FOR FIREFIGHTERS:** Keep unnecessary people away; isolate hazard area and deny entry. Avoid breathing vapors, stay upwind. Do not enter fire area without structural fire fighter's protective equipment including NIOSH/MSHA approved self-contained breathing apparatus (SCBA) in positive pressure mode. Use water spray to knock down vapors. Use halon, carbon dioxide extinguisher or dry powder for small fires. Large fires are best controlled by alcohol foam, fog, and water spray. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks. For massive fire in cargo area, use unmanned hose holder or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire. Extinguish only if fire can be stopped. Use flooding amounts of water as a fog; solid streams may be ineffective. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors; keep upwind. If fire is uncontrollable or containers are exposed to direct flame, water may be ineffective. Fire fighters should wear full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus (SCBA) with full face-piece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Do Not Use: Water in straight hose stream will scatter and spread fire and should not be used.

## **6. ACCIDENTAL RELEASE MEASURES**

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Flammable Liquid; Eliminate ignition sources in the vicinity of the spill or released vapor. Immediately evacuate all nonessential people. Verify that responders are properly trained and wearing appropriate respiratory equipment and fire resistant protective clothing during cleanup operations. For large spills evacuate downwind areas as conditions warrant to prevent exposure

and to allow vapors or fumes to dissipate.

#### **6.2 ENVIRONMENTAL PRECAUTIONS:**

Keep out of water sources, drains and sewers. Do not flush into surface water or sanitary sewer system.

#### **6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:**

Methods for cleanup and containment:

Use explosion proof equipment. Shut off valves, contain spill, keep out of water sources and sewers, for smaller spills add non-flammable absorbent in spill area.

For large spills use foam on spill to minimize vapors clean up by vacuuming then using non-flammable absorbent.

Methods for disposal:

Place all saturated absorbent, using non-sparking tools, in an approved container for disposal. Minimize breathing vapors and skin contact, ventilate confined areas, open all windows and doors, assure conformity with applicable government regulations.

**6.4 REFERENCE TO OTHER SECTIONS:** See Sections 8 and 13.

### **7. HANDLING AND STORAGE**

**7.1 PRECAUTIONS FOR SAFE HANDLING:** This material presents a fire hazard. Liquid quickly evaporates and forms vapor (fumes), which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources, such as pilot lights, welding equipment, and electrical motors and switches. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Avoid breathing vapors in top of shipping container. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid work practices that may release volatile components in the atmosphere. Avoid contaminating soil or releasing material into sewage and drainage systems. Use non-sparking tools to open or close containers.

Advice on general occupational hygiene:

Wash hands before breaks and after work. Keep away from food, drink and animal feeding stuffs. When using do not smoke.

**STATIC HAZARD:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not be sufficient. For more information refer to OSHA Standard 29CFR 1910.106 “Flammable and Combustible Liquids” and National Fire Protection Association (NFPA 77) “Recommended Practice on Static Electricity”.

## **7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**

Follow maximum allowed pile heights specified in the BOCA codes or the NFPA manual. Local fire authorities should be notified for storage of this material in any quantity. Local permits are required for storage in warehouse quantities. Recommended storage temperature: 15 - 25°C. Store large quantities only in cool, dry areas in buildings designed to comply with OSHA 1910.106. Keep containers tight and upright to prevent leakage. Do not contact with oxidizing materials. Keep containers closed when not in use. Do not take internally.

**CONTAINER WARNINGS:** Containers should be Bonded and Grounded when pouring. Avoid free fall of liquid in excess of a few inches. Empty containers release residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, or expose such containers to heat, sparks, static electricity or other sources of ignition. Do not attempt to clean. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum re-conditioner.

**7.3 SPECIFIC END USES:** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **8. EXPOSURE CONTROL (PERSONAL PROTECTION)**

### **8.1 CONTROL PARAMETERS:**

| <b>Ingredient</b>                          | <b>CAS No.</b>                                                                           | <b>% by WT.<br/>Range</b> | <b>Exposure<br/>Limits</b>                                                                                                  |
|--------------------------------------------|------------------------------------------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Naphtha Petroluem<br>Hydrotreated<br>Light | 64742-49-0<br>EC-No.265-151-9<br>Index-No.649-328-00-1<br>Reg.-No. 01-2119475133-43-XXXX | 90-100                    | 342ppm TWA (ACGIH)<br>(Reciprocal Calculations<br>Method for Certain Refined<br>Hydrocarbon Vapors)                         |
| C7 –C8 Alkanes<br>C7- C8 Cycloalkanes      | mixture<br>mixture                                                                       | 60-100<br>5-10            | 1500mg/m3 TWA (ACGIH)<br>N.E.                                                                                               |
| n-Heptane                                  | 142-82-5<br>EC-No.205-563-8<br>Index-No.601-008-00-2<br>Reg.-No. 01-2119457603-38-XXXX   | 25-40                     | 400ppm TWA (ACGIH)<br>500ppm TWA (OSHA)<br>500ppm STEL (ACGIH)<br>85ppm TWA (NIOSH)<br>440ppm STEL (NIOSH)<br>750ppm (IDLH) |
| Methylcyclohexane                          | 108-87-2<br>EC-No.203-624-3<br>Index-No.601-018-00-7<br>Reg.-No. 01-2119556887-18-XXXX   | <10                       | 400ppm TWA (ACGIH)<br>500ppm TWA (OSHA)                                                                                     |



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Key: (PEL) = Permissible Exposure Limit OSHA  
(TLV) = Threshold Limit Value OSHA & ACGIH  
(STEL) = Short Term Exposure Limit ACGIH  
(WEEL) = USA. Workplace Environmental Exposure Levels  
(TWA) = Time Weighted Average  
CAS = Chemical Abstracts Registry Number  
IDLH = Immediate Danger to Life and Health  
N.E. =None Established

## **8.2 EXPOSURE CONTROLS**

**EXPOSURE GUIDELINES:** Consider the potential hazards of this material (Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended.

**ENGINEERING CONTROLS:** Provide general dilution or local exhaust ventilation in volume and pattern to keep concentrations within permitted exposure limits. All areas should be ventilated in accordance with OSHA Regulation 29 CFR Part 1910. Explosion proof motors should be used in mechanical ventilation.

**RESPIRATORY PROTECTION:** The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA):

For vapor concentrations 1 to 10 times ACGIH TWA use an air purifying NIOSH/MSHA Approved respirator with full face-piece and organic vapor cartridges. For concentrations over 10 times ACGIH TWA and in confined areas use a approved positive pressure full face-piece supplied air respirator.

**BODY CLOTHING:** Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged contact with this substance. Use chemical resistant apron or other impervious clothing. Remove and wash contaminated clothing before reuse.

**SKIN PROTECTION:** Employee must wear appropriate protective gloves to prevent contact with this substance.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 65 min

**HYGIENE:** Use good personal hygiene practices, wash hands before eating, drinking, smoking or using toilet facilities.

**EYE/FACE PROTECTION:** Use safety eyewear with splash-guards or face shield. Emergency shower and eyewash should be easily accessible to the work area.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:**

**HEPTANE COMMERCIAL CAS 64742-49-0**

|                                                   |                                 |
|---------------------------------------------------|---------------------------------|
| <b>APPEARANCE:</b>                                | Clear liquid                    |
| <b>COLOR:</b>                                     | Colorless                       |
| <b>ODOR:</b>                                      | Characteristic hydrocarbon odor |
| <b>ODOR THRESHOLD:</b>                            | No data available               |
| <b>pH:</b>                                        | No Data Available               |
| <b>MOLECULAR WEIGHT:</b>                          | 100.2 amu                       |
| <b>MELTING POINT:</b>                             | No data available               |
| <b>BOILING POINT:</b>                             | 93-99°C (199.4-210.2°F)         |
| <b>SPECIFIC GRAVITY:</b>                          | 0.693                           |
| <b>DENSITY (25°C):</b>                            | 0.7 g/ml (20°C)                 |
| <b>VAPOR PRESSURE:</b>                            | 45mmHg @ 20°C (68.0°F)          |
| <b>VAPOR DENSITY:</b>                             | 3                               |
| <b>WATER SOLUBILITY:</b>                          | Negligible                      |
| <b>PARTITION COEFFICIENT N-<br/>OCTANOL/WATER</b> | log Pow: > 3.000                |
| <b>FLASH POINT:</b>                               | -9°C (15.8°F) - closed cup      |
| <b>EVAPORATION RATE (BUTYL ACETATE=1):</b>        | 4.5                             |
| <b>UPPER FLAMMABILITY LIMIT:</b>                  | 6.7% (V)                        |
| <b>LOWER FLAMMABILITY LIMIT:</b>                  | 1% (V)                          |
| <b>AUTO IGNITION TEMPERATURE:</b>                 | 246°C (474.8°F)                 |
| <b>DECOMPOSITION TEMPERATURE:</b>                 | No data available               |
| <b>VISCOSITY:</b>                                 | 0.60cSt                         |
| <b>EXPLOSIVE PROPERTIES:</b>                      | No data available               |
| <b>OXIDIZING PROPERTIES:</b>                      | No data available               |

### **9.2 OTHER INFORMATION:**

|                     |                    |
|---------------------|--------------------|
| <b>Bulk Density</b> | <b>5.8lbs/gal.</b> |
|---------------------|--------------------|

## **10. STABILITY AND REACTIVITY INFORMATION**

**10.1 REACTIVITY:** Not expected to be Explosive, Self-Reactive, Self-Heating, or an Organic Peroxide under US GHS Definition(s).

**10.2 CHEMICAL STABILITY:**    Unstable ( )    Stable (X)

**10.3 POSSIBILITY OF HAZARDOUS REACTIONS:** Vapors may form explosive mixtures with air.

**HAZARDOUS POLYMERIZATION:** May occur ( ) Will not occur (X)

**10.4 CONDITIONS TO AVOID:** Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas. Do not store with strong oxidizing agents.

**10.5 INCOMPATIBLE MATERIALS:** Strong oxidants such as caustic soda, liquid chlorine, oxygen, sodium hypochlorite, inorganic acids e.g. hydrochloric acid hydrogen peroxide.

**10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Fumes, Smoke, Carbon Monoxide and Carbon Dioxide.

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:**

Routes of Entry: Inhalation--> x Skin--> x Ingestion--> x Eye--> x

#### **ACUTE HEALTH EFFECTS:**

Effects of overexposure:

**Eye>** Transient mild irritation including stinging, watering and redness;

**Skin>** Irritating depending on amount of material and speed of removal. Includes redness, burning and drying.

**Inhalation>** Mist or vapor can irritate the throat and lungs.

**Ingestion>** Can irritate mucous membranes of the mouth, throat and esophagus. Symptoms include a burning sensation in the mouth and esophagus, nausea, vomiting, dizziness, drowsiness, loss of consciousness and delirium. This material can be absorbed by the stomach and intestinal tract.

**Chronic:** Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Typical symptoms are cardiovascular disorders, sweetish taste in the mouth, nausea, vomiting, loss of appetite, strong thirst, burning of eyes and bleeding

from the nose. Damage may occur to the kidney or liver.

**Medical Conditions Aggravated by Exposure**> Skin contact may aggravate an existing dermatitis and people with chronic respiratory conditions. Significant exposure may adversely affect people with pre-existing heart disorders making them more susceptible to irregular heart-beats. Disorders of the liver, kidneys, respiratory system may be aggravated.

**Target Organs**> Kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system, eye (lens or cornea).

#### **ACUTE TOXICITY:**

The effects of overexposure shown in Section II are based on acute toxicity profiles. Typical values are:

| <b>Ingredient</b> | <b> Oral LD50 (Rat)</b> | <b> Skin LD50 (Rabbit)</b> | <b> Inhalation LC50 </b> |
|-------------------|-------------------------|----------------------------|--------------------------|
| n-Heptane         | >5000mg/kg              | >2000mg/kg                 | 103000mg/m3/4h           |
| Methylcyclohexane | 2250mg/kg               |                            | 41500mg/m3/2h            |

**SKIN CORROSION/IRRITATION:** No known significant effects or critical hazards

**SERIOUS EYE DAMAGE/EYE IRRITATION:** Causes skin irritation. Defatting to the skin.

**RESPIRATORY OR SKIN SENSITIZATION:** No information available.

**MUTAGENIC EFFECTS:** n-heptane was not mutagenic in the Salmonella/microsome (Ames) assay

#### **CARCINOGEN STATUS:**

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**REPRODUCTIVE TOXICITY:** No data available.

**Specific target organ toxicity (STOT-SE) - single exposure (Globally Harmonized System):** May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity (STOT-RE) - repeated exposure (Globally Harmonized System): no data available

**ASPIRATION HAZARD:** May be fatal if swallowed and enters airways.

**11.2 ADDITIONAL DATA:**

RTECS: MI7700000 – n-Heptane

RTECS: GV6125000 - Methylcyclohexane

**12. ECOLOGICAL INFORMATION**

**DANGEROUS TO AQUATIC LIFE IN HIGH CONCENTRATIONS**

May be dangerous if it enters water intakes.

Notify local health and pollution control officials.

Notify operators of nearby water intakes.

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

**12.1 AQUATIC TOXICITY:**

Heptane

Toxicity to fish

LC50 - *Carassius auratus* (goldfish) - 4 mg/l - 24.0 h

LC50 - *Tilapia mossambica* - 375 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 1.50 mg/l - 48 h

**12.2 PERSISTENCE AND DEGRADABILITY:** Readily biodegradable. Ratio BOD/ThBOD 3.5 %. Degradability 70% in 28 days.

**12.3 BIOACCUMULATIVE POTENTIAL:** The potential is high.

The log octanol/water coefficient for this product is: log Pow 4.66

Biological Oxygen Demand (BOD): No data available

Bio-concentration Factor (BCF): 552

**12.4 MOBILITY IN SOIL:** No data available

**12.5 RESULTS OF PBT AND vPvB:**

PBT assessment results: This substance is not classified as PBT or vPvB.

**12.6 OTHER ADVERSE EFFECTS:** Very toxic to aquatic life with long lasting effects.

**ADDITIONAL DATA:** This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

## **13. DISPOSAL CONSIDERATIONS**

**13.1 WASTE TREATMENT METHODS:** Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly it is the responsibility of the user to determine the proper storage, transportation, treatment and or disposal methodologies for spent materials and residues at time of disposition. Dispose in accordance with all applicable disposal regulations. Incinerate under controlled conditions in a permitted facility.

**CONTAMINATED PACKAGING:** Dispose of as unused product.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

RCRA: The unused product is a RCRA hazardous waste if discarded. The RCRA ID numbers are: D018 and D001.

If the waste is a spent solvent, the appropriate spent solvent code should be used.

**DISPOSAL MUST BE IN ACCORDANCE WITH STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE, 48 CFR 262**

**CONTAMINATED PACKAGING:** Dispose of as unused product.

## **14. TRANSPORT INFORMATION**

### **Land Transport (DOT)**

14.1 USDOT ID Number-----> UN1206

14.2 USDOT Shipping Name-----> Heptanes

14.3 USDOT Hazard Classification-----> 3 (Flammable Liquid)

USDOT Label Codes-----> 3

14.4 USDOT Package Code-----> II

14.5 Marine Pollutant-----> Yes

14.6 Special precautions for user-----> Yes

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

Emergency Response Guide-----> 128

### **Sea Transport (IMDG)**

14.1 ID Number-----> UN1206

14.2 Proper shipping name-----> HEPTANES

14.3 Hazard Classification-----> 3 (Flammable Liquid)

Label Codes-----> 3

14.4 Package Code-----> II

14.5 Marine Pollutant-----> Yes

14.6 Special precautions for user-----> No  
EMS-Number-----> F-E, S-D

**Air Transport (IATA)**

14.1 ID Number-----> UN1206  
14.2 Proper shipping name-----> Heptanes  
14.3 Hazard Classification-----> 3 (Flammable Liquid)  
Label Codes-----> 3  
14.4 Package Code-----> II  
14.5 Environmental hazard-----> Yes  
The environmentally hazardous substance mark is not required.  
14.6 Special precautions for user-----> No

**15. REGULATORY INFORMATION**

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION  
SPECIFIC FOR THE SUBSTANCE OR MIXTURE:**

**SARA TITLE III (Superfund Amendment and Reauthorization Act)**

**SECTION 302 AND 304: Extremely Hazardous Substance List (40 CFR 355) - Not Listed**

**SECTION 313: Toxic Chemicals Listing (40 CFR 372.65) - Listed; Low level components listed: Toluene <0.1%; Ethylbenzene <0.001%; Benzene <0.001%; Naphthalene <0.0001%; Cumene <0.001%; n-Hexane <0.1%**

**SECTION 311/312: Hazard Categorization (40 CFR 370) - Acute Health Hazard, Chronic Health Hazard, Fire Hazard**

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)**

**SECTION 102(A) Hazardous Substances (40 CFR 302.4) - Not Listed  
Reportable Quantity - None**

**SECTION 101(14) Reportable Quantity: None**

**Clean Water Act (CWA) 307: toluene; ethylbenzene; benzene; naphthalene Clean**

**Water Act (CWA) 311: cyclohexane; toluene; ethylbenzene; benzene; naphthalene**

**Massachusetts Right to Know Components  
n-Heptane CAS142-82-5**

**Pennsylvania Right to Know Components  
HEPTANES, MIXTURE OF ISOMERS, CONTAINS >=25% NHEPTANE,**

CAS-64742-49-0

**New Jersey Right to Know Components**

**HEPTANES, MIXTURE OF ISOMERS, CONTAINS >=25% NHEPTANE,**

**CAS-64742-49-0**

**n-Heptane CAS142-82-5**

**California Prop. 65 Components**

This product can expose you to Benzene, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Ethylbenzene, Cumene, Naphthalene, which are known to the State of California to cause cancer, and Toluene, n-Hexane, which are known to the State of California to cause birth defects or other reproductive harm.

**TSCA (Toxic Substance Control Act)**

**HEPTANES, MIXTURE OF ISOMERS, CONTAINS >=25% NHEPTANE,**

**CAS-64742-49-0 and n-Heptane CAS-No. 142-82-5 are listed on the TSCA Inventory. All components are listed or exempted.**

**International Inventories:**

| <b><u>Country or Region</u></b>               | <b><u>Inventory Name</u></b>                                           | <b><u>On inventory yes/no</u></b> |
|-----------------------------------------------|------------------------------------------------------------------------|-----------------------------------|
| <b><u>Australia</u></b>                       | Australian Inventory of Chemical Substances (AICS)                     | Yes                               |
| <b><u>Canada</u></b>                          | Domestic Substances List (DSL)                                         | Yes                               |
| <b><u>Canada</u></b>                          | Non-Domestic Substances List (NDSL)                                    | No                                |
| <b><u>China</u></b>                           | Inventory of Existing Chemical Substances in China (IECSC)             | Yes                               |
| <b><u>Europe</u></b>                          | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                               |
| <b><u>Europe</u></b>                          | European List of Notified Chemical Substances (ELINCS)                 | No                                |
| <b><u>Japan</u></b>                           | Inventory of Existing and New Chemical Substances (ENCS)               | Yes                               |
| <b><u>Japan</u></b>                           | Industrial Safety & Health Law Inventory (ISHL)                        | Yes                               |
| <b><u>Korea</u></b>                           | Existing Chemicals List (ECL)                                          | Yes                               |
| <b><u>Mexico</u></b>                          | National Inventory of Chemical Substances (INSQ)                       | Yes                               |
| <b><u>New Zealand</u></b>                     | New Zealand Inventory                                                  | Yes                               |
| <b><u>Philippines</u></b>                     | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                               |
| <b><u>Switzerland</u></b>                     | Inventory of Notified New Substances (CHINV)                           | Yes                               |
| <b><u>Taiwan</u></b>                          | National Existing Chemical Inventory (NECI)                            | Yes                               |
| <b><u>United States &amp; Puerto Rico</u></b> | Toxic Substances Control Act Inventory                                 | Yes                               |

**15.2 CHEMICAL SAFETY ASSESSMENT: A chemical safety assessment has been carried out for this substance.**

**16. OTHER INFORMATION:**

**Hazard Rating:**

**4-Extreme**

**3-High**



2-Moderate  
1-Slight  
0-Insignificant

NFPA RATINGS (SCALE 0-4): Health=1 Fire=3 Reactivity=0  
HMIS RATINGS (SCALE 0-4): Health=1 Fire=3 Reactivity=0 PPE=G

Hazard statement(s) from Section 2 and 3:

H225 Highly flammable liquid and vapor.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H320 Causes eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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Prepared by-----> T.G. Fenstermaker, Jr.

Acronyms:

ACGIH - American Conference of Governmental Industrial Hygienists  
AIHA - American Industrial Hygiene Association  
ANSI - American National Standards Institute  
API - American Petroleum Institute  
CERCLA - Comprehensive Emergency Response, Compensation, and Liability Act  
DOT - U.S. Department of Transportation  
EPA - U.S. Environmental Protection Agency  
HMIS - Hazardous Materials Information System  
IARC - International Agency For Research On Cancer  
MSHA - Mine Safety and Health Administration  
NFPA - National Fire Protection Association  
NIOSH - National Institute of Occupational Safety and Health  
NOIC - Notice of Intended Change (Proposed change to ACGIH TLV)  
NTP - National Toxicology Program  
OPA - Oil Pollution Act of 1990  
OSHA - U.S. Occupational Safety & Health Administration  
PEL - Permissible Exposure Limit (OSHA)  
RCRA - Resource Conservation and Recovery Act  
REL - Recommended Exposure Limit (NIOSH)  
SARA - Superfund Amendments and Reauthorization Act of 1986 Title III  
SCBA - Self-Contained Breathing Apparatus  
STEL - Short-Term Exposure Limit (generally 15 minutes)  
TLV - Threshold Limit Value  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average (8hr.)  
WHMIS - Canadian Workplace Hazardous Materials Information System

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