



# SWEETLAKE CHEMICAL

446 Heights Blvd. • Houston, TX 77007 • 713-827-8707 • Fax 713-827-8718

Petroleum Ether  
PET5000

## Section 1 - Chemical Product and Company Identification

61

Material Name: Petroleum Ether

CAS Number: 8032-32-4

Chemical Formula: Unspecified or Variable

EINECS Number: 232-453-7

ACX Number: X1001220-7

HAN 105

Synonyms: BENZINE (LIGHT PETROLEUM DISTILLATE); BENZOLINE; CANADOL; LIGROIN; PAINTERS NAPHTHA; PETROLEUM ETHER; PETROLEUM ETHER, HIGH BOILING; PETROLEUM SPIRIT; REFINED SOLVENT NAPHTHA; SKELLYSOLVE F; SKELLYSOLVE G; VARNISH MAKERS' & PAINTERS' NAPHTHA; VARNISH MARKER'S NAPHTHA; VM & P NAPHTHA; VM AND P NAPHTHA

General Use: Used as a solvent in paints and adhesives. Also used for selective solvent extraction processes. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

## Section 2 - Composition / Information on Ingredients

Name	CAS	%
petroleum ether	8032-32-4	> 99

OSHA PEL

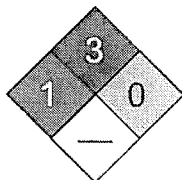
NIOSH REL

TWA: 350 mg/m<sup>3</sup>; Ceiling: 1800 mg/m<sup>3</sup> (15-minute).

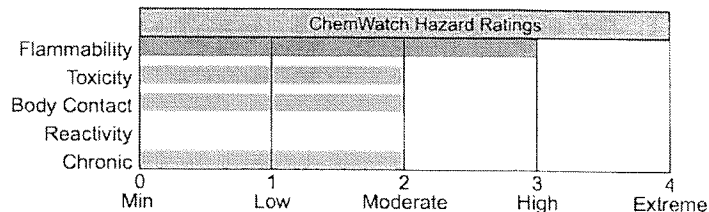
ACGIH TLV

TWA: 300 ppm.

## Section 3 - Hazards Identification



Fire Diamond



HMIS	
1	Health
3	Flammability
0	Reactivity

ANSI Signal Word

**Danger!**



Flammable

### ☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Clear colorless liquid; characteristic odor. Irritating to eyes/skin. Other Acute Effects: headache, dizziness, staggering, vomiting, narcosis, aspiration pneumonitis, heart rhythm disturbances. Chronic Effects: possible neuropathy. Flammable.

### Potential Health Effects

Target Organs: eyes, skin, respiratory system, central nervous system (CNS)

Primary Entry Routes: inhalation, ingestion

#### Acute Effects

**Inhalation:** The vapor is highly discomforting to the upper respiratory tract.

Inhalation hazard is increased at higher temperatures.

Acute effects from inhalation of high concentrations of vapor are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterized by headache and dizziness, increased reaction time, fatigue and loss of coordination.

If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death.

Material is highly volatile and may quickly form concentrated atmosphere in confined or unventilated area. Vapor is heavier than air and may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. Massive vapor exposure may be fatal.

High inhaled concentrations of mixed hydrocarbons may produce narcosis characterized by nausea, vomiting and lightheadedness. Inhalation of aerosols may produce severe pulmonary edema, pneumonitis and pulmonary hemorrhage. Inhalation of petroleum hydrocarbons consisting substantially of low molecular weight species (typically C2-C12) may produce irritation of mucous membranes, incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and anesthetic stupor.

Massive exposures may produce central nervous system depression with sudden collapse and deep coma; fatalities have been recorded. Irritation of the brain and/or apneic anoxia may produce convulsions. Although recovery following overexposure is generally complete, cerebral micro-hemorrhage of focal post-inflammatory scarring may produce epileptiform seizures some months after the exposure. Pulmonary episodes may include chemical pneumonitis with edema and hemorrhage. The lighter hydrocarbons may produce kidney and neurotoxic effects. Pulmonary irritancy increases with carbon chain length for paraffins and olefins. Alkenes produce pulmonary edema at high concentrations. Liquid paraffins may produce anesthesia and depressant actions leading to weakness, dizziness, slow and shallow respiration, unconsciousness, convulsions and death. C5-7 paraffins may also produce polyneuropathy. Aromatic hydrocarbons accumulate in lipid rich tissues (typically the brain, spinal cord and peripheral nerves) and may produce functional impairment manifested by nonspecific symptoms such as nausea, weakness, fatigue, vertigo; severe exposures may produce inebriation or unconsciousness.

Many of the petroleum hydrocarbons are cardiac sensitizers and may cause ventricular fibrillations.

**Eye:** The liquid may produce eye discomfort and is capable of causing temporary impairment of vision and/or transient eye inflammation, ulceration. The vapor is discomforting to the eyes.

**Skin:** The liquid may produce skin discomfort following prolonged contact.

Defatting and/or drying of the skin may lead to dermatitis. Toxic effects may result from skin absorption.

Absorption by skin may readily exceed vapor inhalation exposure.

Symptoms for skin absorption are the same as for inhalation.

Bare unprotected skin should not be exposed to this material.

The material may accentuate any pre-existing skin condition.

**Ingestion:** Considered an unlikely route of entry in commercial/industrial environments.

The liquid may produce gastrointestinal discomfort and may be harmful if swallowed. Ingestion may result in nausea, pain and vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis

Ingestion of petroleum hydrocarbons may produce irritation of the pharynx, esophagus, stomach and small intestine with edema and mucosal ulceration resulting; symptoms include a burning sensation in the mouth and throat.

Large amounts may produce narcosis with nausea and vomiting, weakness or dizziness, slow and shallow respiration, swelling of the abdomen, unconsciousness and convulsions. Myocardial injury may produce arrhythmias, ventricular fibrillation and electrocardiographic changes. Central nervous system depression may also occur. Light aromatic hydrocarbons produce a warm, sharp, tingling sensation on contact with taste buds and may anaesthetise the tongue.

Aspiration into the lungs may produce coughing, gagging and a chemical pneumonitis with pulmonary edema and hemorrhage.

**Carcinogenicity:** NTP - Not listed; IARC - Not listed; OSHA - Not listed; NIOSH - Not listed; ACGIH - Class A3, Animal carcinogen; EPA - Not listed; MAK - Not listed.

**Chronic Effects:** Prolonged or continuous skin contact with the liquid may cause defatting with drying, cracking, irritation and dermatitis following.

Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes.

**CAUTION:** Material may contain n-hexane.

Chronic inhalation or skin exposure to n-hexane may cause peripheral neuropathy, which is damage to nerve ends in extremities, e.g. fingers, with loss of sensation and characteristic thickening. Nerve damage has been documented with chronic exposures of greater than 500 ppm.

Improvement in condition does not immediately follow removal from exposure and symptoms may progress for two or three months. Recovery may take a year or more depending on severity of exposure, and may not always be complete.

Exposure to n-hexane with methyl ethyl ketone (MEK) will accelerate the appearance of damage, but MEK alone will not cause the nerve damage.

Other isomers of hexane do not cause nerve damage.

Worker exposure by all routes should be monitored and kept to a minimum.

Topical application of petroleum middle distillates to mice is associated with overt, severe skin irritation and a significant increase in the number of animals with squamous cell carcinomas. Carcinogenic potential of middle petroleum distillates is related to the content of polynuclear aromatic hydrocarbons (PAHs). Squamous carcinomas are probably the result of the combined initiating activity of PAHs promoted by the mitotic activity caused by overt damage to the skin.

Repeated or prolonged exposure to mixed hydrocarbons may produce narcosis with dizziness, weakness, irritability, concentration and/or memory loss, tremor in the fingers and tongue, vertigo, olfactory disorders, constriction of visual field, paraesthesias of the extremities, weight loss and anemia and degenerative changes in the liver and kidney.

Chronic exposure by petroleum workers, to the lighter hydrocarbons, has been associated with visual disturbances, damage to the central nervous system, peripheral neuropathies (including numbness and paresthesias), psychological

and neurophysiological deficits, bone marrow toxicities (including hypoplasia possibly due to benzene) and hepatic and renal involvement. Chronic dermal exposure to petroleum hydrocarbons may result in defatting which produces localized dermatoses. Surface cracking and erosion may also increase susceptibility to infection by microorganisms. One epidemiological study of petroleum refinery workers has reported elevations in standard mortality ratios for skin cancer along with a dose-response relationship indicating an association between routine workplace exposure to petroleum or one of its constituents and skin cancer, particularly melanoma. Other studies have been unable to confirm this finding.

### Section 4 - First Aid Measures

**Inhalation:** Remove to fresh air.

Lay patient down. Keep warm and rested.

If breathing is shallow or has stopped, ensure clear airway and apply resuscitation. Transport to hospital or doctor.

**Eye Contact:** Immediately hold the eyes open and flush continuously for at least 15 minutes with fresh running water. Ensure irrigation under eyelids by occasionally lifting the upper and lower lids.

Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin Contact:** Immediately remove all contaminated clothing, including footwear (after rinsing with water).

Wash affected areas thoroughly with water (and soap if available).

Seek medical attention in event of irritation.

**Ingestion:** Contact a Poison Control Center.

Do NOT induce vomiting. Give a glass of water.

*After first aid, get appropriate in-plant, paramedic, or community medical support.*

**Note to Physicians:** For acute or short-term repeated exposures to petroleum distillates or related hydrocarbons:

1. Primary threat to life from pure petroleum distillate ingestion and/or inhalation is respiratory failure.
  2. Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases ( $pO_2 < 50$  mm Hg or  $pCO_2 > 50$  mm Hg) should be intubated.
  3. Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
  4. A chest x-ray should be taken immediately after stabilization of breathing and circulation to document aspiration and detect the presence of pneumothorax.
  5. Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitization to catecholamines.
- Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
6. Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients.

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### Section 5 - Fire-Fighting Measures

**Flash Point:** -7 °C to 12.778 °C

**Autoignition Temperature:** 243 °C

**LEL:** 1.2% v/v

**UEL:** 6.0% v/v

**Extinguishing Media:** Foam, dry chemical powder, BCF (where regulations permit), carbon dioxide.

Water spray or fog - Large fires only.

**General Fire Hazards/Hazardous Combustion Products:** Liquid and vapor are highly flammable.

Severe fire hazard when exposed to heat, flame and/or oxidizers.

Vapor forms an explosive mixture with air.

Severe explosion hazard, in the form of vapor, when exposed to flame or spark. Vapor may travel a considerable distance to source of ignition.

Heating may cause expansion/decomposition with violent rupture of containers.

On combustion, emits toxic fumes of carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>).

**Fire Incompatibility:** Avoid contamination with strong oxidizing agents as ignition may result. Attacks, softens and may dissolve rubber, many plastics, paints and coatings.

**Fire-Fighting Instructions:** Contact fire department and tell them location and nature of hazard.

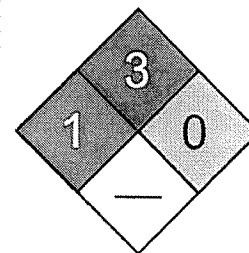
May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways. Consider evacuation.

Fight fire from a safe distance, with adequate cover.

If safe, switch off electrical equipment until vapor fire hazard removed.

Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid

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Fire Diamond

pools.

Do not approach containers suspected to be hot.

Cool fire-exposed containers with water spray from a protective location.

If safe to do so, remove containers from path of fire.

### Section 6 - Accidental Release Measures

**Small Spills:** Remove all ignition sources. Clean up all spills immediately.

Avoid breathing vapors and contact with skin and eyes.

Control personal contact by using protective equipment.

Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container.

**Large Spills:** Clear area of personnel and move upwind.

Contact fire department and tell them location and nature of hazard.

May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or waterways. Consider evacuation.

No smoking, bare lights or ignition sources. Increase ventilation.

Stop leak if safe to do so. Water spray or fog may be used to disperse/absorb vapor. Contain spill with sand, earth or vermiculite.

Use only spark-free shovels and explosion proof equipment.

Collect recoverable product into labeled containers for recycling.

Absorb remaining product with sand, earth or vermiculite.

Collect solid residues and seal in labeled drums for disposal.

Wash area and prevent runoff into drains.

If contamination of drains or waterways occurs, advise emergency services.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120).

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### Section 7 - Handling and Storage

**Handling Precautions:** Avoid generating and breathing mist. Avoid all personal contact, including inhalation.

Wear protective clothing when risk of exposure occurs.

Use in a well-ventilated area. Prevent concentration in hollows and sumps.

DO NOT enter confined spaces until atmosphere has been checked.

Avoid smoking, bare lights, heat or ignition sources.

When handling, DO NOT eat, drink or smoke.

Vapor may ignite on pumping or pouring due to static electricity.

DO NOT use plastic buckets. Ground and secure metal containers when dispensing or pouring product. Use spark-free tools when handling.

Avoid contact with incompatible materials.

Keep containers securely sealed. Avoid physical damage to containers.

Always wash hands with soap and water after handling.

Work clothes should be laundered separately.

Use good occupational work practices. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

**Recommended Storage Methods:** Metal can; metal drum. Packing as recommended by manufacturer.

Check all containers are clearly labeled and free from leaks.

**Regulatory Requirements:** Follow applicable OSHA regulations.

### Section 8 - Exposure Controls / Personal Protection

**Engineering Controls:** CARE: Use of a quantity of this material in confined space or poorly ventilated area, where rapid build-up of concentrated atmosphere may occur, could require increased ventilation and/or protective gear. Use in a well-ventilated area.

Local exhaust ventilation may be required for safe working, i. e. , to keep exposures below required standards; otherwise, PPE is required.

If risk of inhalation or overexposure exists, wear NIOSH-approved respirator or work in fume hood.

Correct respirator fit is essential to obtain adequate protection.

In confined spaces where there is inadequate ventilation, wear full-face air supplied breathing apparatus.

Provide adequate ventilation in warehouse or closed storage areas.

**Personal Protective Clothing/Equipment:**

**Eyes:** Safety glasses with side shields; or as required, chemical goggles.

Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

**Hands/Feet:** Barrier cream with polyethylene gloves or Neoprene gloves or PVC gloves.

Safety footwear.

**Respiratory Protection:**

Exposure Range >300 to 1000 ppm: Air Purifying, Negative Pressure, Half Mask  
 Exposure Range >1000 to 15,000 ppm: Supplied Air, Constant Flow/Pressure Demand, Half Mask  
 Exposure Range >15,000 to 300,000 ppm: Supplied Air, Constant Flow/Pressure Demand, Full Face  
 Exposure Range >300,000 to unlimited ppm: Self-contained Breathing Apparatus, Pressure Demand, Full Face  
 Cartridge Color: black  
**Other:** Overalls. Eyewash unit. Ensure there is ready access to a safety shower.

### Section 9 - Physical and Chemical Properties

**Appearance/General Info:** Volatile, highly flammable clear liquid with strong petrol like odor; floats on water.  
 Soluble in organic solvents such as benzene, chloroform. Contains n-hexane in amount as advised.  
**Physical State:** Liquid **pH (1% Solution):** Not applicable.  
**Odor Threshold:** 1 to 40 ppm **Boiling Point:** 95 °C (203 °F) to 160 °C (320 °F)  
**Vapor Density (Air=1):** 2.5 **Freezing/Melting Point:** -40 °C (-40 °F)  
**Formula Weight:** Not applicable. **Volatile Component (% Vol):** 100  
**Specific Gravity (H<sub>2</sub>O=1, at 4 °C):** 0.6 - 0.7 **Water Solubility:** Insoluble  
**pH:** Not applicable

### Section 10 - Stability and Reactivity

**Stability/Polymerization/Conditions to Avoid:** Product is considered stable. Hazardous polymerization will not occur.  
**Storage Incompatibilities:** Avoid storage with oxidizers.

### Section 11 - Toxicological Information

#### Toxicity

Inhalation (rat) LC<sub>50</sub>: 3400 ppm/4h

#### Irritation

Eye (human): 880 ppm/15m

See RTECS OI 6180000, for additional data.

### Section 12 - Ecological Information

**Environmental Fate:** No data found.  
**Ecotoxicity:** No data found.  
**Biochemical Oxygen Demand (BOD):** 8%, 5 days

### Section 13 - Disposal Considerations

**Disposal:** Consult manufacturer for recycling options and recycle where possible.  
 Follow applicable federal, state, and local regulations.  
 Incinerate residue at an approved site.  
 Recycle containers where possible, or dispose of in an authorized landfill.

### Section 14 - Transport Information

#### DOT Hazardous Materials Table Data (49 CFR 172.101):

**Note:** This material has multiple possible HMT entries. Choose the appropriate one based on state and condition of specific material when shipped.

**Shipping Name and Description:** Petroleum distillates, n.o.s. or Petroleum products, n.o.s.

**ID:** UN1268

**Hazard Class:** 3 - Flammable and combustible liquid

**Packing Group:** 1 - Great Danger

**Symbols:**

**Label Codes:** 3 - Flammable Liquid

**Special Provisions:** 144, T11, TP1, TP8

**Packaging:** Exceptions: 150 Non-bulk: 201 Bulk: 243

**Quantity Limitations:** Passenger aircraft/rail: 1 L Cargo aircraft only: 30 L

**Vessel Stowage:** Location: E Other:



2006-06

Petroleum Ether

PET5000

**Shipping Name and Description:** Petroleum distillates, n.o.s. *or* Petroleum products, n.o.s.

**ID:** UN1268

**Hazard Class:** 3 - Flammable and combustible liquid

**Packing Group:** II - Medium Danger

**Symbols:**

**Label Codes:** 3 - Flammable Liquid

**Special Provisions:** 144, IB2, T7, TP1, TP8, TP28

**Packaging:** Exceptions: 150 Non-bulk: 202 Bulk: 242

**Quantity Limitations:** Passenger aircraft/rail: 5 L Cargo aircraft only: 60 L

**Vessel Stowage:** Location: B Other:



**Shipping Name and Description:** Petroleum distillates, n.o.s. *or* Petroleum products, n.o.s.

**ID:** UN1268

**Hazard Class:** 3 - Flammable and combustible liquid

**Packing Group:** III - Minor Danger

**Symbols:**

**Label Codes:** 3 - Flammable Liquid

**Special Provisions:** 144, B1, IB3, T4, TP1, TP29

**Packaging:** Exceptions: 150 Non-bulk: 203 Bulk: 242

**Quantity Limitations:** Passenger aircraft/rail: 60 L Cargo aircraft only: 220 L

**Vessel Stowage:** Location: A Other:



### Section 15 - Regulatory Information

**EPA Regulations:**

**RCRA 40 CFR:** Not listed

**CERCLA 40 CFR 302.4:** Not listed

**SARA 40 CFR 372.65:** Not listed

**SARA EHS 40 CFR 355:** Not listed

**TSCA:** Listed

### Section 16 - Other Information

**Disclaimer:** Judgments as to the suitability of information herein for the purchaser's purposes are necessarily the purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, Genium Group, Inc. extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose or for consequences of its use.



## SWEETLAKE CHEMICAL

446 Heights Blvd. • Houston, TX 77007 • 713-827-8707 • Fax 713-827-8718

**Customer:** Talen's Marine

**PO#:** 177632

**Delivery Date:** 3/13/09

**Lot:** 11758031309HAN

### CERTIFICATE OF ANALYSIS

SLC HAN 105

<b>Density, Lbs/Gallon</b>	<b>7.21</b>
<b>Flash Point</b>	<b>&lt; 75 F</b>
<b>IBP</b>	<b>164 F</b>
<b>EP</b>	<b>508 F</b>

"The information set forth on this data sheet is believed to be accurate as of the present date. Since the actual use by others is beyond our control, it is the purchaser's/user's responsibility to determine the suitability of the product for their own use and purpose. SweetLake Chemical makes no representations or warranties, either expressed, implied for fitness for a particular purpose. SweetLake Chemical neither assumes responsibility regarding the accuracy or suitability of such information or product for application to purchaser's intended use or purpose nor for the consequences of its use. No suggestions for use are intended, and nothing herein shall be construed as a recommendation to infringe any existing patents or to violate any federal, state, or local laws, rules, or regulations."