



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** 40-100 and Light Pale Oil  
**Version #** 03  
**Issue date** 16-January-2014  
**Revision date** 21-June-2014  
**Supersedes date** 16-January-2014  
**CAS #** Mixture  
**Product code** 40, 60, 100 and Light Pale Oil  
**MSDS Number** 503  
**Synonym(s)** 40 Pale Oil, 60 Pale Oil, 100 Pale Oil and Light Pale Oil  
**Manufacturer/Supplier** Valero Marketing & Supply Company and Affiliates  
P.O. Box 696000  
San Antonio, TX 78269-6000  
**General Assistance** 210-345-4593  
**Emergency** 24 Hour Emergency 866-565-5220  
1-800-424-9300 (CHEMTREC USA)

## 2. Hazards Identification

**Physical state** Liquid.  
**Appearance** Oily, viscous liquid.  
**Emergency overview** May be fatal if swallowed and enters airways.  
**OSHA regulatory status** This product is hazardous according to OSHA 29 CFR 1910.1200.  
**Potential health effects**  
**Routes of exposure** Ingestion.  
**Eyes** Under normal conditions of intended use, this material does not pose a eye hazard.  
**Skin** Under normal conditions of intended use, this material does not pose a skin hazard.  
**Inhalation** Under normal conditions of intended use, this material is not expected to be an inhalation hazard.  
**Ingestion** May be fatal if swallowed and enters airways.  
**Signs and symptoms** Swallowing or vomiting of the liquid may result in aspiration into the lungs.  
**Potential environmental effects** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	100
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	100

## 4. First Aid Measures

**First aid procedures**  
**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Skin contact** Remove and isolate contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse. Remove contaminated clothing and shoes. Destroy or thoroughly clean contaminated shoes.  
**Inhalation** If symptomatic, move to fresh air.  
**Ingestion** Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis.

<b>Notes to physician</b>	Treat symptomatically. Symptoms may be delayed.
<b>General advice</b>	Wash contaminated clothing before re-use.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	No unusual fire or explosion hazards noted.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Protection of firefighters</b>	
<b>Protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Hazardous combustion products</b>	Carbon oxides. Nitrogen oxides. Phosphorus oxides.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. For personal protection, see section 8 of the MSDS. Avoid breathing mist or vapor. Wear appropriate personal protective equipment (See Section 8).
<b>Environmental precautions</b>	Do not contaminate water.
<b>Methods for containment</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	<p>Extinguish all flames in the vicinity. Should not be released into the environment. The product is immiscible with water and will spread on the water surface.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills to original containers for re-use. For waste disposal, see section 13 of the MSDS. Absorb spill with vermiculite or other inert material, then place in a sealed container for chemical waste. Flush area with water. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.</p>

## 7. Handling and Storage

<b>Handling</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with eyes. Avoid breathing mist or vapor. Avoid contact with skin. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear personal protective equipment. Observe good industrial hygiene practices. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with eyes, skin, and clothing.
<b>Storage</b>	Store locked up. Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS). Keep away from food, drink and animal feedingstuffs.

## 8. Exposure Controls / Personal Protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	TWA	5 mg/m3	Inhalable fraction.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	PEL	2000 mg/m3 500 ppm 5 mg/m3	Mist.

#### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

#### Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	TWA	5 mg/m3	Inhalable fraction.

#### Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	STEL	10 mg/m3	Mist.

#### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

**Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)**

Components	Type	Value	Form
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

**Mexico. Occupational Exposure Limit Values**

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

<b>Engineering controls</b>	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas.
<b>Personal protective equipment</b>	
<b>Eye / face protection</b>	Wear safety glasses with side shields (or goggles). Do not get in eyes. Eye wash fountain is recommended.
<b>Skin protection</b>	Wear appropriate chemical resistant clothing. Chemical resistant gloves. Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact glove manufacturer for specific information.
<b>Respiratory protection</b>	Wear positive pressure self-contained breathing apparatus (SCBA). In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134. Respirator type: Use NIOSH approved respirator with organic vapor/acid gas protection.
<b>General hygiene considerations</b>	Keep away from food and drink. 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.

**9. Physical & Chemical Properties**

<b>Appearance</b>	Oily, viscous liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Water white to pale straw.
<b>Odor</b>	Petroleum-like.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Vapor pressure</b>	0.16 kPa
<b>Vapor density</b>	Not available.
<b>Boiling point</b>	> 446 °F (> 230 °C)
<b>Melting point/Freezing point</b>	-65 - -44 °F (-53.89 - -42.22 °C)
<b>Solubility (water)</b>	Insoluble
<b>Flash point</b>	> 288.0 °F (> 142.2 °C) Pensky-Martens Closed Cup
<b>Flammability limits in air, upper, % by volume</b>	Not available.
<b>Flammability limits in air, lower, % by volume</b>	Not available.
<b>Auto-ignition temperature</b>	> 518 °F (> 270 °C)

<b>Partition coefficient (n-octanol/water)</b>	> 6
<b>Other data</b>	
<b>Decomposition temperature</b>	> 536 °F (> 280 °C)
<b>Density</b>	902 - 910 kg/m <sup>3</sup> at 59°F (15°C)
<b>Kinematic viscosity</b>	3.7 - 22 cSt
<b>Kinematic viscosity temp</b>	104 °F (40 °C)

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Heat, flames and sparks. Avoid temperatures exceeding the decomposition temperature. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

<b>Toxicological data</b>		
<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	>= 5000 mg/kg
<i>Oral</i>		
LD50	Rat	>= 5000 mg/kg
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)		
<b>Acute</b>		
<i>Inhalation</i>		
LD50	Rat	2.81 mg/l

\* Estimates for product may be based on additional component data not shown.

<b>Sensitization</b>	Not a skin sensitizer.
<b>Acute effects</b>	Based on available data, the classification criteria are not met.
<b>Local effects</b>	Ingestion may result in vomiting; aspiration (breathing) of vomitus into lungs must be avoided as even small quantities may result in aspiration pneumonitis.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>ACGIH Carcinogens</b>	
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	A2 Suspected human carcinogen.
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	A4 Not classifiable as a human carcinogen.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)	3 Not classifiable as to carcinogenicity to humans.
<b>US NTP Report on Carcinogens: Known carcinogen</b>	
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Known To Be Human Carcinogen.

## 12. Ecological Information

<b>Ecotoxicity</b>	Contains a substance which causes risk of hazardous effects to the environment. This material has not been tested for environmental effects.
<b>Environmental effects</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation / Accumulation</b>	Has the potential to bioaccumulate.
<b>Bioaccumulative potential</b>	
<b>Octanol/water partition coefficient log Kow</b>	
40-100 and Light Pale Oil (CAS Mixture)	> 6
<b>Mobility in environmental media</b>	No data available. The product is immiscible with water and will spread on the water surface.

### 13. Disposal Considerations

<b>Waste codes</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations. When this product as supplied is to be discarded as waste, it does not meet the definition of a RCRA waste under 40 CFR 261.
<b>Waste from residues / unused products</b>	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

<b>DOT</b>	Not regulated as a hazardous material by DOT.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>TDG</b>	Not regulated as dangerous goods.

### 15. Regulatory Information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	
	Not regulated.
<b>Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List</b>	
	Not regulated.
<b>CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)</b>	
	None
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
<b>SARA 302 Extremely hazardous substance</b>	
	Not listed.
<b>SARA 311/312 Hazardous chemical</b>	Yes
<b>Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)</b>	Not controlled
<b>Canadian regulations</b>	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
<b>WHMIS status</b>	Non-controlled

**Inventory status**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**State regulations**

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - California Hazardous Substances (Director's): Listed substance**

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Listed.

Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Not listed.

**US. Massachusetts RTK - Substance List**

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5) Listed.

Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6) Listed.

**US. New Jersey Worker and Community Right-to-Know Act**

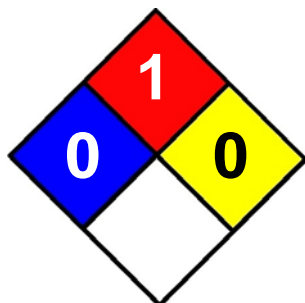
Distillates (petroleum), hydrotreated light naphthenic (CAS 64742-53-6)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**Mexico regulations**

This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

**16. Other Information****NFPA Ratings**

## Disclaimer

This Material Safety Data Sheet (MSDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this MSDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.