



**PHYSIOLOGICAL EFFECTS:**Code  
No. 01810

## Effects of Exposure

## Acute:

Eyes: Believed to be minimally irritating.

Skin: Believed to be minimally irritating.

Respiratory System: Believed to be minimally irritating if not in excess of permissible concentrations; see page 1.

Chronic: See Additional Comments, page 6.

Other: -

## Sensitization Properties:

Skin: Yes  No  Unknown Respiratory: Yes  No  Unknown Median Lethal Dose (LD<sub>50</sub> LC<sub>50</sub>) (Species)Oral Similar product > 10 g/kg (rat); practically non-toxicInhalation N.D.Dermal Similar product > 8 g/kg (rabbit); practically non-toxicOther N. D.

## Irritation Index, Estimation of Irritation (Species)

Skin Similar product 0.42/8.0 (rabbit); no appreciable effectEyes Similar product 5.33/110 (rabbit); no appreciable effectSymptoms of Exposure See above.**FIRE PROTECTION INFORMATION**Ignition Temp.<sup>o</sup>F. N.D.Flash Point <sup>o</sup>F. (Method) 400<sup>o</sup>F (COC)Flammable Limits (%) Lower N.D.Upper N.D.

## Products Evolved When Subjected to Heat or Combustion:

Carbon monoxide, carbon dioxide, aldehydes and ketones, combustion products of zinc, nitrogen, calcium, sulfur, copper, and phosphorus.

## Recommended Fire Extinguishing Agents And Special Procedures:

According to the National Fire Protection Association Guide, use water spray, dry chemical, foam, or carbon dioxide.

Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.

## Unusual or Explosive Hazards:

None.



## ENVIRONMENTAL PROTECTION

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### Waste Disposal Method:

Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixture, processes, etc. may render the resulting material hazardous. (See Remarks for Waste Classification.)

### Procedures in Case of Breakage or Leakage:

(Transportation Spills Call CHEMTREC (800) 424-9300)  
Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

### Remarks:

Waste Classification: Product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased form.

## PRECAUTIONS

WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS

Used gasoline motor oils have caused skin cancer in laboratory animals when repeatedly applied and left in place between applications.  
In case of skin contact, promptly wash thoroughly with soap and water.  
Oil-soiled clothing should be cleaned before reuse.

### Requirements for Transportation, Handling and Storage:

Minimum feasible handling temperatures should be maintained. Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

DOT Proper Shipping Name: N.A.

DOT Hazard Class (if applicable): N.A.

## CHEMICAL AND PHYSICAL PROPERTIES

Boiling Point (°F) N.D. Vapor Pressure N.D. (mmHg)

Specific Gravity 0.8844 (H<sub>2</sub>O=1) Vapor Density N.D. (Air=1)

Appearance and Odor Bright and clear liquid, mild additive odor

pH of undiluted product N.A.

Solubility N.D.

Percent Volatile by Volume N.D.

Evaporation N.D. ( )=1

Viscosity 40.2 cSt @40°C

Other -

Hazardous Polymerizations - Occur X Do not occur

The Material Reacts Violently With: (If others is checked below, see additional comments on page 6 for further details)

Air Water Heat Strong Oxidizers Others None of These  
X

N.D. - Not Determined N.A. - Not Applicable  
< - Less Than > - Greater Than

**COMPOSITION**Code  
No. 01810

<u>Chemical/Common Name</u>	<u>CAS No.</u>	<u>Exposure Limit</u>	<u>Range in %</u>
*dialkyldithiophosphoric acid, zinc salt	68649423	None Established	1.00 - 3.99
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	5mg/m3 ACGIH (MIST) 5mg/m3 OSHA (MIST) 10mg/m3 STEL (MIST)	65.00 - 79.99
Severely refined hydrotreated heavy naph- thenic petroleum distillates	64742525	5mg/m3 ACGIH (MIST) 5mg/m3 OSHA (MIST) 10mg/m3 STEL (MIST)	11.00 - 19.99

\*Hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.



PRODUCT SHIPPING LABEL

Code  
No.

01810

01810 HAVOLINE PREMIUM HD SAE 10W

WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS

Used gasoline motor oils have caused skin cancer in laboratory animals when repeatedly applied and left in place between applications.

In case of skin contact, promptly wash thoroughly with soap and water.

Oil-soiled clothing should be cleaned before reuse.

<u>Chemical/Common Name</u>	<u>CAS No.</u>	<u>Range in %</u>
*dialkyldithiophosphoric acid, zinc salt	68649423	1.00 - 3.99
Solvent-dewaxed heavy paraffinic petroleum distillates	64742650	65.00 - 79.99
Severely refined hydrotreated heavy naphthenic petroleum distillates	64742525	11.00 - 19.99

\*Hazardous according to OSHA (1910.1200) or one or more state Right-To-Know lists.

HMIS

Health	: 0	Reactivity	: 0
Flammability	: 1	Special	: -

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

HEALTH EMERGENCY TELEPHONE: (914) 831-3400 (EXT. 204)

Texaco Inc.  
2000 Westchester Avenue  
White Plains, New York 10650

For Additional Information Concerning:

Fuels/Lubricants/Antifreezes  
call (914) 831-3400 (EXT.204)  
Chemicals  
call (512) 459-6543  
Transportation Spills  
call CHEMTREC (800) 424-9300

**ADDITIONAL COMMENTS**Code  
No. 01810

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT  
STATE OF MICHIGAN CRITICAL MATERIALS ACT (REVISED 1987)  
0.12% zinc, 0.012% copper

New and used motor oils have been tested for potential carcinogenicity in laboratory mice. Only used gasoline motor oils were shown to cause skin cancer when repeatedly applied to mice without any effort to remove the material between applications. Strict compliance to the Occupational Control Procedures outlined in this data sheet is believed to be adequate protection from such hazards. Used diesel engine oils have NOT been shown to produce a significant incidence of skin cancer in laboratory animals when tested under similar conditions.

To determine applicability or effect of any law or regulation with respect to the product, users should consult his legal advisor or the appropriate government agency. Texaco does not undertake to furnish advice on such matters.

By R. T. Richards Title Mgr. Env. Conservation & Toxicology  
Date 03-10-88  New  Revised, Supersedes 01-08-88

N.D. - Not Determined      N.A. - Not Applicable  
< - Less Than              > - Greater Than



## FIRE PROTECTION INFORMATION

### Ignition Temperature

Refers to the temperature in degrees Fahrenheit, at which a liquid will give off enough flammable vapor to ignite and burn continuously for 5 seconds.

### Flash Point (Method used)

Refers to the temperature in degrees Fahrenheit, at which a liquid will give off enough flammable vapor to ignite.

### Flammable Limits

Refers to the range of gas or vapor concentration (percent by volume in air) which will burn or explode if an ignition source is present. Lower means the lower flammable limit and upper means the upper flammable limit given in percent.

### Products Evolved When Subjected to Heat or Combustion.

The products evolved when this material is subjected to heat or combustion. Includes temperature at which oxidation or other forms of degradation occurs.

### Recommended Fire Extinguishing Agents and Special Procedures

Specifies the fire fighting agents that should be used to extinguish fires. If unusual fire hazards are involved or special procedures indicated, this is specified.

### Unusual Fire or Explosive Hazards

Specifies hazards to personnel in case of fire, explosive danger.

## ENVIRONMENTAL PROTECTION

Specifies how this product may be disposed.

Indicates precautions necessary in the event that leakage or breakage occurs. Included are (a) clean-up procedures, (b) personal protective equipment if necessary, (c) hazards that may be created, i.e. fire, explosion, etc.

## PRECAUTIONS

Label that is required or recommended.

### Requirements for Transportation, Handling and Storage

Specifies handling and storage procedures. Gives ICC, DOT, or other regulations related to safety and health for transportation.

## CHEMICAL AND PHYSICAL PROPERTIES

### Boiling Point (or Range)

In degrees Fahrenheit or Celsius Boiling Point at 760 mmHg.

### Vapor Pressure

Pressure exerted when a solid or liquid is in equilibrium with its own vapor.

### Specific Gravity

The ratio of the density of the product to the density of water.

### Vapor Density

The ratio of the density of the vapor at saturation concentration ( 20 degrees Celsius or 68 degrees Fahrenheit ) to the density of air at mmHg.

### Appearance and Odor

Refers to the general characterization of the material, e.g. powder, colorless liquid, aromatic odor, etc.

### pH

Refers to the degree of acidity or basicity of the material in a specific concentration.

pH1-5 - STRONGLY ACIDIC  
pH5-7 - WEAKLY ACIDIC  
pH7-9 - WEAKLY BASIC  
pH9-14 - STRONGLY BASIC

### Solubility

Refers to the solubility of a material by weight in water at room temperature. The term negligible, less than 0.1 %; slight, 0.1 to 1%; moderate, 1 to 10%; appreciable, 10% or greater. Gives solubility in organic solvents where appropriate.

### Percent Volatile By Volume

Refers to the amount volatilized at 20 degrees Celsius or 68 degrees Fahrenheit when allowed to evaporate.

### Evaporation

Gives the rate of evaporation compared to a standard

### Viscosity

Measure of flow characteristics in Kinematic viscosity in Centistokes.

### Hazardous Polymerization

Hazardous polymerization is that reaction which takes place at a rate which produces large amounts of energy. Indicates whether it may or may not occur and under what storage conditions.

### Does the Material React Violently

Indicates whether the material will react violently, releasing large amounts of energy when exposed under conditions listed.

### Composition

Components of the product as required by OSHA (1910.1200) and one or more state Right to Know laws.



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## EXPLANATION OF THE INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL SAFETY DATA SHEET

### PRODUCT INFORMATION

#### Trade Name and Synonyms

Refer to the code number and name under which the product is marketed and the common commercial name of the product.

Manufacturer's Name and Address Self explanatory.

#### Chemical Name and/or Family or Description

Refer to chemical, generic, or descriptive name of single elements and compounds.

For purposes of this form, a product is defined as hazardous if it possesses one or more of the following characteristics: (1) has a flash-point below 200 degrees Fahrenheit, closed cup or subject to spontaneous heating; (2) has a threshold limit value as established by the American Conference of Governmental Industrial Hygienists and/or the Occupational Safety and Health Administration (with exception to petroleum oil mist). (3) a single dose oral LD50 below 500 mg/kg; (4) causes burns to the skin in the short-term exposure or is systemically toxic by skin contact; (5) has been demonstrated to be a skin or eye irritant or causes respiratory irritation; (6) may cause skin or respiratory sensitization; (7) has teratogenic, mutagenic or other toxic effects; (8) may cause asphyxia or pneumoconiosis; (9) in the course of normal operations may produce dusts, gases, fumes, vapor, mist, or smoke which have one or more of the above characteristics; (10) contains a component which may be carcinogenic according to NTP (National Toxicology Program), IARC (International Agency for Research on Cancer), OSHA (Occupational Safety and Health Administration), EPA (Environmental Protection Agency) and/or NCI (National Cancer Institute.); (11) has a median LC50 (RATS) in air of 200 ppm or less by volume of gas or vapor or 2.0 mg/l or less of mist, fume or dust when administered by continuous inhalation for one hour; (12) is a hazard as identified in the Product Shipping Label on page 5.

### OCCUPATIONAL CONTROL PROCEDURES

(Consult your Industrial Hygienist or Occupational Health Specialist.)

#### Protective Equipment

Type of protective equipment that is necessary for the safe handling and use of this product.

#### Ventilation

Normal means adequate to maintain permissible concentrations.

Ventilation: type, i.e. local exhaust, mechanical, etc.

#### Permissible Concentrations

Indicates worker exposure limits, such as the Threshold Limit Value (TLV) as established by the American Conference of Governmental Industrial Hygienists or standards, promulgated by the Occupational Safety and Health Administration (e.g., PEL).

TLV-Time Weighted Average (TWA) is the concentration in air averaged over an 8 hour daily exposure.

TLV-Ceiling (C) is the ceiling limit on concentration that should not be exceeded during any part of the working day.

"Skin" Notation (ACGIH) indicates that dermal absorption can contribute to overall exposure following direct contact or exposure to airborne material.

Permissible Exposure Level (PEL) is the time weighted concentration in air averaged over an 8 hour daily exposure.

### EMERGENCY AND FIRST AID PROCEDURES

Administer first aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

### PHYSIOLOGICAL EFFECTS

#### Acute Exposures (Eye, Skin, Respiratory System)

Refers to the most common effects that would be expected to occur from direct contact with the product.

#### Chronic

Refers to the effects that are most likely to occur from repeated or prolonged exposure.

#### Sensitizer

Means a substance which will cause on or in normal living tissue, through an allergic or photodynamic process, a hypersensitivity which becomes evident on reapplication of, or exposure to, the same substance.

#### Median Lethal Dose or Concentration (LD50,LC50)

Refers to that dose or concentration of the material which will produce death in 50 per cent of the animals. For inhalation, exposure time is indicated.

#### Irritation Index

Refers to an empirical score (Draize Method) for eye and skin irritation when tested by the method described. If numbers are not available, an estimated score indicates whether or not the material is an irritant.