

TEXACO INC.
INDUSTRIAL HYGIENE, TOXICOLOGY, AND MATERIAL
SAFETY DATA SHEET

0886 1 S RWW



NOTE: NO REPRESENTATION IS MADE AS TO THE ACCURACY OF THE INFORMATION
HEREIN. SEE PAGE 7 FOR CONDITIONS UNDER WHICH DATA ARE FURNISHED.

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Trade Name and Synonyms 01981 MARFAK HEAVY DUTY 2		000635
Manufacturer's Name Texaco Inc.		Emergency Telephone No. (914) 831-3400 ext. 204
Address P.O. Box 509 Beacon, NY 12508		
Chemical Name and/or Family or Description Automotive Greases		
THIS PRODUCT IS CLASSIFIED AS: <u> X </u> NOT HAZARDOUS: <u> </u> HAZARDOUS BY DEFINITION NO.(S) <u> </u> ON ATTACHED EXPLANATION SHEETS		
WARNING STATEMENT: NONE CONSIDERED NECESSARY		
OCCUPATIONAL CONTROL PROCEDURES		
Protective Equipment (Type) Eyes: Chemical type goggles or face shield optional. Skin: Exposed employes should exercise reasonable personal cleanliness; this includes cleansing exposed skin areas several times daily with soap and water, and laundering or dry cleaning soiled work clothing at least weekly. Inhalation: None required when handling at minimum feasible temperatures. Ventilation: Normal		
Permissible Concentrations: Air: None established for greases.		
EMERGENCY AND FIRST AID PROCEDURES		
First Aid Eyes: As with most foreign materials, should eye contact occur, flush eyes with plenty of water. Skin: None considered necessary. Ingestion: None considered necessary. Inhalation: None considered necessary. Other Instructions: None.		

**PHYSIOLOGICAL EFFECTS:**

Code

No.

01981

Effects of Exposure**Acute:****Eyes:**

Believed to be minimally irritating.

Skin:

Believed to be minimally irritating.

Respiratory System: Believed to be minimally irritating.**Chronic:**

N.D.

Other:

-

Sensitization Properties:**Skin:** Yes ☐ No ☐ Unknown ☒**Respiratory:** Yes ☐ No ☐ Unknown ☒**Median Lethal Dose (LD₅₀ LC₅₀) (Species)****Oral** Believed to be >5 g/kg (rat); practically non-toxic**Inhalation** N.D.**Dermal** Believed to be >3 g/kg (rabbit); practically non-toxic**Other** N. D.**Irritation Index, Estimation of Irritation (Species)****Skin** Believed to be <0.5/8.0 (rabbit); no appreciable effect**Eyes** Believed to be <15/110 (rabbit); no appreciable effect**Symptoms of Exposure** None expected other than possible minimal irritation**FIRE PROTECTION INFORMATION****Ignition Temp. °F.** N.D.**Flash Point °F. (Method)** N.D. (grease).**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 nitrogen and sulfur.

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.

N.D. - Not Determined

N.A. - Not Applicable

< - Less Than

> - Greater Than



PRODUCT SHIPPING LABEL

Code
No.

01981

01981 MARFAK HEAVY DUTY 2

NONE CONSIDERED NECESSARY

Chemical/Common Name	CAS No.	Exposure Limit	Range in %
Severely refined hydrotreated heavy naphtheni- c petroleum distillate	64742525	5.0 mg/m3 TWA-ACGIH	35.00 - 49.99
Residual oils (petroleum), solvent-dewaxed	64742627	5.0 mg/m3 TWA	35.00 - 49.99
Sodium oleate			11.00 - 19.99

To the best of our knowledge, none of the above listed components is 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/Additives
call (409) 722-8381
Transportation Spills
call CHEMTREC (800) 424-9300



ADDITIONAL COMMENTS

Code
No.

01981

TEXACO INTENDS TO COMPLY FULLY WITH PROVISIONS OF THE TOXIC SUBSTANCES CONTROL ACT
STATE OF MICHIGAN CRITICAL MATERIALS ACT (REVISED 1985)
No critical materials present. Maximum usable temperature 275 F

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

01-17-86

New



Revised, Supersedes

12-04-85

N.D. - Not Determined

N.A. - Not Applicable

< - Less Than

> - Greater Than



ENVIRONMENTAL PROTECTION		Code No. 01981												
<p>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.)</p> <p>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.</p> <p>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.</p>														
PRECAUTIONS														
NONE CONSIDERED NECESSARY														
<p>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.</p> <p>DOT Proper Shipping Name: N.A. DOT Hazard Class (if applicable): N.A.</p>														
CHEMICAL AND PHYSICAL PROPERTIES														
<p>Boiling Point (°F) <u>N.D.</u> Vapor Pressure <u>N.D.</u> (mmHg)</p> <p>Specific Gravity <u>N.D.</u> (H₂O=1) Vapor Density <u>N.D.</u> (Air=1)</p> <p>Appearance and Odor <u>Semi-solid</u></p> <p>pH of undiluted product <u>N.A.</u> Solubility <u>N.D.</u></p> <p>Percent Volatile by Volume <u>N.D.</u> Evaporation <u>N.D.</u> ()=1</p> <p>Viscosity <u>cSt @ 100 C = 17</u> Other <u>-</u></p> <p>Hazardous Polymerizations <u> </u> Occur <u>X</u> Do not occur</p> <p>The Material Reacts Violently With: (If others is checked below, see additional comments on page 6 for further details)</p> <table style="width: 100%;"><tr><td style="width: 15%;">Air</td><td style="width: 15%;">Water</td><td style="width: 15%;">Heat</td><td style="width: 15%;">Strong Oxidizers</td><td style="width: 15%;">Others</td><td style="width: 20%;">None of These</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td style="text-align: center;">X</td></tr></table>			Air	Water	Heat	Strong Oxidizers	Others	None of These						X
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N.D. - Not Determined N.A. - Not Applicable
/ - Less Than > - Greater Than

**COMPOSITION**Code
No. 01981

Chemical/Common Name	CAS No.	Exposure Limit	Range in %
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NOTE: THIS DATA IS FURNISHED GRATUITOUSLY INDEPENDENT OF ANY SALE OF THE PRODUCT. ONLY FOR YOUR INVESTIGATION AND INDEPENDENT VERIFICATION. WHILE THE INFORMATION IS BELIEVED TO BE CORRECT, TEXACO INC. MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. TEXACO INC. SHALL IN NO EVENT BE RESPONSIBLE FOR ANY DAMAGES OF WHATSOEVER NATURE DIRECTLY OR INDIRECTLY RESULTING FROM THE PUBLICATION OR USE OF OR RELIANCE UPON DATA CONTAINED HEREIN. NO WARRANTY, EITHER EXPRESS OR IMPLIED OF MERCHANTABILITY OR FITNESS OF ANY NATURE WITH RESPECT TO THE PRODUCT OR TO THE DATA HEREIN IS MADE HEREUNDER. DATA SHEETS ARE AVAILABLE FOR ALL TEXACO PRODUCTS. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL TEXACO PRODUCTS YOU BUY, PROCESS, USE, OR DISTRIBUTE, AND ENCOURAGED TO ADVISE ANYONE WORKING WITH OR EXPOSED TO SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

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 below 500 ppm gases and vapor below 5 mg/m³ for dust, fumes and mist, and below 25 MPPCF for mineral dust; (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 in air of 200 ppm or less by volume of gas or vapor, or 20 mg/l or less of mist, fume or dust when administered by inhalation.

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 Threshold Limit Value (TLV) and/or Time Weighted Average (TWA) as established by the American Conference of Governmental Industrial Hygienists and/or standards promulgated by the Occupational Safety and Health Administration.

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 which tested by the method described. If numbers are not available, a yes or no answer indicates whether or not the material is an irritant.

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 (State 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 can be successfully disposed of.

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.

PRECAUTIONARY LABEL

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 760 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 manufactured.