



Material Safety Data Sheet

Chevron Plus Unleaded Gasoline

MSDS: 3205

Revision #: 26 **Revision Date:** 3/31/2003

Click here to search the [product data sheet](#) database

Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

CHEVRON MID-GRADE UNLEADED GASOLINE

Product Number(s): CPS201001 [See Section 16 for Additional Product Numbers]

Synonyms: Calco Mid-Grade Unleaded Gasoline, CHEVRON Plus Unleaded Gasoline

Company Identification

Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response

CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency

ChevronTexaco Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information

Technical Information: (510) 242-5357

SPECIAL NOTES: This MSDS applies to: Federal Reformulated Gasoline, California Reformulated Gasoline, Wintertime Oxygenated Gasoline, Low RVP Gasoline and Conventional Gasoline.

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %volume
Benzene	71-43-2	0.1 - 4.9 %volume
Ethyl benzene	100-41-4	0.1 - 3 %volume
Naphthalene	91-20-3	0.1 - 2 %volume
Ethanol	64-17-5	0 - 10 %volume
Methyl tert-butyl ether (MTBE)	1634-04-4	0 - 15 %volume
Tertiary amyl methyl ether (TAME)	994-05-8	0 - 17 %volume
Ethyl tert-butyl ether (ETBE)	637-92-3	0 - 18 %volume

Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE
- HARMFUL OR FATAL IF SWALLOWED - MAY CAUSE LUNG DAMAGE IF SWALLOWED
- VAPOR HARMFUL
- CAUSES SKIN IRRITATION
- CAUSES EYE IRRITATION
- LONG-TERM EXPOSURE TO VAPOR HAS CAUSED CANCER IN LABORATORY ANIMALS

- KEEP OUT OF REACH OF CHILDREN
- TOXIC TO AQUATIC ORGANISMS

IMMEDIATE HEALTH EFFECTS

Eye: Contact with the eyes causes irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: This material is not expected to cause birth defects or other harm to the developing fetus based on animal data.

Cancer: Prolonged or repeated exposure to this material may cause cancer. Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Risk depends on duration and level of exposure. See Section 11 for additional information.

SECTION 4 FIRST AID MEASURES

Eye: Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get medical attention if irritation persists.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.
Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonitis.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Flammable liquid.

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

FLAMMABLE PROPERTIES:

Flashpoint: (Tagliabue Closed Cup) < -45 °C (< -49 °F)

Autoignition: > 280 °C (> 536 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6

EXTINGUISHING MEDIA: Dry Chemical, CO₂, AFFF Foam or alcohol resistant foam if >15% volume polar solvents (oxygenates).

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: Use water spray to cool fire-exposed containers and to protect personnel. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required. This material is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Petroleum Exclusion. Therefore, releases to the environment may not be reportable under CERCLA.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, 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. Never siphon gasoline by mouth. Use only as a motor fuel. Do not use for cleaning, pressure appliance fuel, or any other such use. Do not store in open or unlabeled containers. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.

Unusual Handling Hazards: WARNING! Do not use as portable heater or appliance fuel. Toxic fumes may accumulate and cause death.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

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, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

General Storage Information: DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), 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. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

Respiratory Protection: Determine if airborne concentrations are below the recommended exposure limits. If not, wear an approved respirator that provides adequate protection from measured concentrations of this material, such as: Air-Purifying Respirator for Organic Vapors. When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Limit	TWA	STEL	Ceiling	Notation
Benzene	ACGIH_TLV	.5 ppm	2.5 ppm		Skin A1
Benzene	OSHA_PEL	1 ppm	5 ppm		
Benzene	OSHA_Z2	10 ppm		25 ppm	
Ethanol	ACGIH_TLV	1000 ppm			A4
Ethanol	OSHA_PEL	1000 ppm			
Ethyl benzene	ACGIH_TLV	100 ppm	125 ppm		A3
Ethyl benzene	OSHA_PEL	100 ppm	125 ppm		
Ethyl tert-butyl ether (ETBE)	ACGIH_TLV	5 ppm			
Gasoline	ACGIH_TLV	300 ppm	500 ppm		A3
Gasoline	OSHA_PEL	300 ppm	500 ppm		

Methyl tert-butyl ether (MTBE)	ACGIH_TLV	50 ppm			A3
Naphthalene	ACGIH_TLV	10 ppm	15 ppm		Skin A4
Naphthalene	OSHA_PEL	10 ppm	15 ppm		
Tertiary amyl methyl ether (TAME)	CHEVRON		50 ppm		

Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Colorless to yellow

Physical State: Liquid

Odor: Petroleum odor

pH: NA

Vapor Pressure: 5 psi - 15 psi (Typical) @ 37.8°C (100°F)

Vapor Density (Air = 1): 3 - 4 (Typical)

Boiling Point: 37.8°C (100°F) - 204.4°C (400°F) (Typical)

Solubility: Insoluble in water; miscible with most organic solvents.

Freezing Point: NA

Melting Point: NA

Specific Gravity: 0.7 g/ml - 0.8 g/ml @ 15.6°C (60.1°F)

Viscosity: <1 SUS @ 37.8°C (100°F)

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Incompatibility With Other Materials: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The Draize eye irritation mean score in rabbits for a 24-hour exposure was: 0/110.

Skin Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.

Skin Sensitization: This material did not cause sensitization reactions in a Modified Buehler guinea pig test.

Acute Dermal Toxicity: 24 hour(s) LD50: >3.75g/kg (rabbit).

Acute Oral Toxicity: LD50: >5 ml/kg (rat)

Acute Inhalation Toxicity: 4 hour(s) LD50: >2000ppm (rat).

ADDITIONAL TOXICOLOGY INFORMATION:

Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refuelling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2, 8 and 15 of this MSDS. More detailed information on the health hazard of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers).

NEUROTOXICITY: Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments. In an inhalation study, groups of 6 Fischer rats (3 male, 3 female) were exposed to 2056 ppm of wholly vaporized unleaded gasoline for 6 hours per day, 5 days per week for up to 18 months. Histopathology of the peripheral nervous system and spinal cord revealed no distal axonal neurophy of the type associated with exposure to n-hexane even though gasoline contained 1.9% n-hexane. The authors concluded that gasoline treatment may have amplified the incidence and prominence of some naturally occurring age-related (subclinical) in the nervous system. **BIRTH DEFECTS AND REPRODUCTIVE TOXICITY:** An inhalation study with rats exposed to 0, 400 and 1600 ppm of wholly vaporized unleaded gasoline, 6 hours per day on day 6 through 16 of gestation, showed no teratogenic effects nor indication of toxicity to either the mother or the fetus. Another inhalation study in rats exposed to 3000, 6000, or 9000 ppm of gasoline vapor, 6 hours per day on day 6 through 20 of gestation, also showed no teratogenic effects nor indications of toxicity to either the mother or the fetus.

CHRONIC TOXICITY/CANCER: Wholly vaporized unleaded gasoline was used in a 3 month inhalation study. Groups of 40 rats (20 males, 20 female) and 8 squirrel monkeys (4 male, 4 female) were exposed 6 hours per day and 5 days per week for 13 weeks to 384 or 1552 ppm gasoline. One group of each species served as unexposed controls. The initial conclusion of this study was that inhalation of gasoline at airborne concentrations of up to 1522 ppm caused no toxicity in rats or monkeys. However, further histopathological examination of male rat kidneys on the highest dose group revealed an increased incidence and severity of regenerative epithelium and dilated tubules containing proteinaceous deposits. Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice. The mechanism of this response is still being investigated but it is thought to be an epigenetic process unique to the female mouse.

This exposure also caused kidney damage and eventually kidney cancer in male rats. No other animal model studied has shown these adverse kidney effects and there is no physiological reason to believe that they would occur in man. EPA has concluded that mechanism by which wholly vaporized unleaded gasoline causes kidney damage is unique to the male rat. The effects in that species (kidney damage and cancer) should not be used in human risk assessment. In their 1988 review of carcinogenic risk from gasoline, The International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e. possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene and 1, 3-butadiene. The actual evidence for carcinogenicity in humans was considered inadequate.

MUTAGENICITY: Gasoline was not mutagenic, with or without activation, in the Ames assay (*Salmonella typhimurium*), *Saccharomyces cerevisiae*, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells. **EPIDEMIOLOGY:** To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The 96 hour(s) LC50 for rainbow trout (*Oncorhynchus mykiss*) is 2.7 mg/l.

The 48 hour(s) LC50 for water flea (*Daphnia magna*) is 3.0 mg/l.

The 96 hour(s) LC50 for sheepshead minnow (*Cyprinodon variegatus*) is 8.3 mg/l.

The 96 hour(s) LC50 for mysid shrimp (*Mysidopsis bahia*) is 1.8 mg/l.

This material is expected to be toxic to aquatic organisms. Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels, different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

ENVIRONMENTAL FATE

This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Name: GASOLINE
DOT Hazard Class: 3 (Flammable Liquid)
DOT Identification Number: UN1203
DOT Packing Group: II

SECTION 15 REGULATORY INFORMATION

SARA 311/312 CATEGORIES:

1. Immediate (Acute) Health Effects:	YES
2. Delayed (Chronic) Health Effects:	YES
3. Fire Hazard:	YES
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

4_I1=IARC Group 1	15=SARA Section 313
4_I2A=IARC Group 2A	16=CA Proposition 65
4_I2B=IARC Group 2B	17=MA RTK
05=NTP Carcinogen	18=NJ RTK
06=OSHA Carcinogen	19=DOT Marine Pollutant
09=TSCA 12(b)	20=PA RTK

The following components of this material are found on the regulatory lists indicated.

Benzene	15, 16, 17, 18, 20, 4_I1, 5, 6
Ethanol	17, 18, 20
Ethyl benzene	15, 17, 18, 20, 4_I2B
Gasoline	17, 18, 20
Methyl tert-butyl ether (MTBE)	15, 17, 18, 20, 9
Naphthalene	15, 16, 17, 18, 20, 4_I2B
Tertiary amyl methyl ether (TAME)	9

CERCLA REPORTABLE QUANTITIES(RQ)/SARA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

Component	Component RQ	Component TPQ	Product RQ
Benzene	10 lbs	None	186 lbs
Ethanol	100 lbs	None	1961 lbs
Ethyl benzene	1000 lbs	None	34964 lbs
Methyl tert-butyl ether (MTBE)	1000 lbs	None	7513 lbs
Naphthalene	100 lbs	None	4000 lbs

CHEMICAL INVENTORIES:

CANADA: All the components of this material are on the Canadian DSL or have been notified under the New Substance Notification Regulations, but have not yet been published in the Canada Gazette.

UNITED STATES: All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory.

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids

Class D, Division 2, Subdivision A: Very Toxic Material - Carcinogenicity

Class D, Division 2, Subdivision B: Toxic Material - Skin or Eye Irritation

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 3 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Additional Product Number(s): CPS201003, CPS201004, CPS201006, CPS201007, CPS201008, CPS201010, CPS201011, CPS201018, CPS201021, CPS201025, CPS201031, CPS201032, CPS201033, CPS201034, CPS201036, CPS201037, CPS201038, CPS201041, CPS201043, CPS201046, CPS201048, CPS201064, CPS201208, CPS201210, CPS201211, CPS201212, CPS201230, CPS201231, CPS201232, CPS201260, CPS201261, CPS201262, CPS201271, CPS201272, CPS201273, CPS201280, CPS201281, CPS201282, CPS201288, CPS201290, CPS201291, CPS201292, CPS201851, CPS201852, CPS201858, CPS201859, CPS201860, CPS204004, CPS204005, CPS204012, CPS204013, CPS204024, CPS204025, CPS204048, CPS204049, CPS204072, CPS204073, CPS204090, CPS204091, CPS204106, CPS204107, CPS204118, CPS204119, CPS204142, CPS204143, CPS204166, CPS204167, CPS204190, CPS204191, CPS204202, CPS204203, CPS204214, CPS204215, CPS204226, CPS204227, CPS204250, CPS204251, CPS204274, CPS204275, CPS204292, CPS204293, CPS204325, CPS204326, CPS204360, CPS204361, CPS204366, CPS204367, CPS204372, CPS204373, CPS204378, CPS204379, CPS204384, CPS204385, CPS204390, CPS204391, CPS204396, CPS204397, CPS204402, CPS204403, CPS204408, CPS204409, CPS204414, CPS204415, CPS204420, CPS204421, CPS204426, CPS204427, CPS204432, CPS204433, CPS204438, CPS204439, CPS204468, CPS204469, CPS204486, CPS204487, CPS204504, CPS204505, CPS204522, CPS204523, CPS204540, CPS204541, CPS204558, CPS204559, CPS204576, CPS204577, CPS204594, CPS204595, CPS204612, CPS204613, CPS204630, CPS204631, CPS204648, CPS204649, CPS204666, CPS204667, CPS204692, CPS204693, CPS204698, CPS204699, CPS204704, CPS204705, CPS204710, CPS204711, CPS204723, CPS204724, CPS204729, CPS204730

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: Section 1 (Product Codes). This Material Safety Data Sheet has been prepared using the ProSteward MSDS system.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV	-	Threshold Limit Value	TWA	-	Time Weighted Average
STEL	-	Short-term Exposure Limit	PEL	-	Permissible Exposure Limit
			CAS	-	Chemical Abstract Service Number
NDA	-	No Data Available	NA	-	Not Applicable
<=	-	Less Than or Equal To	>=	-	Greater Than or Equal To

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the ChevronTexaco Energy Research & Technology Company, 100 Chevron Way, Richmond, California 94802.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.



Texaco Extended Life Coolant / Anti-Freeze

<p>Printable Salesfax-->  COOL-2230.pdf</p>	<p>Click MSDS to search MSDS database.</p>
---	--

CPS 227997 (MSDS 10300)

Texaco Extended Life Coolant/Anti-Freeze

Texaco Extended Life Coolant/Anti-Freeze is a single-phase, ethylene glycol type heavy duty diesel engine coolant based on Texaco's patented extended life organic corrosion inhibitor system with nitrite added.

CPS 227998 (MSDS 10309)

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is a 50/50 mixture of Texaco Extended Life Coolant/Anti-Freeze with deionized water.

CPS 227999 (MSDS 10317)

Texaco Extender

Texaco Extender is the prescribed recharge for Texaco Extended Life Coolant/Anti-Freeze.

It is recommended that only Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is used for initial fill and top-offs. Use Texaco Extended Life Coolant/Anti-Freeze, should you need to adjust the freeze point as required by ambient conditions.

Product Application

Texaco Extended Life Coolant System is a heavy-duty engine coolant system which incorporates patented organic corrosion inhibitor technology. Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze meets ASTM D 4656 and D 5345. When properly employed, in solution, Texaco Extended Life Coolant/Anti-Freeze meets both ASTM D 3306 for automotive service and ASTM D 4985 for

heavy-duty diesel service. This is a, nitrate-, borate-, phosphate-, silicate-, and amine-free formulation which uses Texaco's patented carboxylate technology to provide maximum protection of the six basic metal alloys found in most heat transfer systems. Since the coolant contains no phosphates or silicates, hard water deposits in the cooling system are reduced. Water pump seal wear is reduced as a result of fewer abrasive dissolved solids in Texaco Extended Life Coolant System which results in improved water pump seal life.

The patented carboxylate corrosion inhibitors in Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze have been shown to remain above 95% of their original concentration after 300,000 miles of on-road use (three years or 6,000 hours of off-highway use) in heavy-duty diesels without the addition of supplemental coolant additives. After 300,000 miles of on-road use (three years or 6,000 hours of off-highway use), simply add the Texaco Extender, and Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is good for another 300,000 miles of on-road use (three years or 6,000 hours of off-highway use). This system allows for 600,000 miles of on-road use (six years or 12,000 hours of off-highway use) between coolant changes without worrying about loss of corrosion protection.

Note: These products are not to be used to protect the inside of potable water systems against freezing

Product Descriptions and Features

Texaco Extended Life Coolant/Anti-Freeze is manufactured from ethylene glycol and a highly effective, long-term corrosion inhibitor package. This inhibitor system eliminates the need for silicates, phosphates, borates, nitrates, and amine additives traditionally used for this purpose.

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is a 50/50 mixture of Texaco Extended Life Coolant/Anti-Freeze with deionized water for freeze protection down to -37°C and boil over protection to 129°C with a 15 lb pressure cap. These products need no precharging or recharging for 300,000 miles of on-road use (three years or 6,000 hours of off-highway use). After 300,000 miles, simply add Texaco Extender, and Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is good for another 300,000 miles of on-road use (three years or 6,000 hours of off-highway use). Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze is compatible with other traditional silicate antifreezes, but the extended life benefits will be reduced if mixed.

Texaco Extender is the prescribed recharge for Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze. It has been specifically formulated to double the life of Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze. It should only be added at 300,000 miles of on-road use (three years or 6,000 hours of off-highway

use) in heavy duty commercial engines to restore protection against scale buildup, corrosion, cavitation erosion, and pitting of wet sleeve liners. Use of this product at the specified interval is necessary to ensure maximum coolant life of 600,000 miles of on-road use (six years or 12,000 hours of off-highway use). After 600,000 miles of on-road use (six years or 12,000 hours of off-highway use), simply drain your system and fill with a fresh charge of Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze. It is recommended that coolants be changed at least every six years and disposed of properly.

Do not add traditional coolants or SCAs to Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze, since doing so will reduce the product's extended life benefits. Texaco Extender is not recommended for use with the initial fill of Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze.

Benefits

- 300,000 miles on-road use (three years or 6,000 hours off-highway use) on initial fill
- Additional 300,000 miles on-road use (three years or 6,000 hours off-highway use) by adding Texaco Extender
- Easy maintenance
- No inhibitor testing is required
- Excellent pitting protection for wet sleeve cylinder liners
- Effective, long term corrosion protection for aluminum, brass, cast iron, steel, solder, and copper
- Improved water pump life due to reduced water pump seal wear resulting from fewer dissolved solids
- No silicate dropout or gel formation during use or storage
- Reduced hard water scale
- Excellent heat transfer
- Superior protection in high operating temperatures
- Protects against winter freeze up and minimizes the chance of summer boil over
- Outstanding hot surface aluminum protection
- Also suitable for gasoline powered automotive and industrial engines
- Compatible with conventional antifreeze. Dilution with conventional antifreeze will reduce extended life benefits. Texaco recommends that this product not be diluted by more than 10% with conventional coolants.

Product Recommendations and Approvals

Texaco Extended Life Coolant System is recommended for all heavy duty and natural gas engines including Caterpillar, Navistar, Cummins, Detroit Diesel,

Mack, MTU, and other original equipment manufacturers (OEMs). Texaco Extended Life Coolant System is especially recommended for use in the cooling systems of all types of industrial internal combustion engines including systems containing large amounts of aluminum alloys.

Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze and Texaco Extended Life Coolant/Anti-Freeze meet or exceed:

For automotive service

ASTM D 4656 (prediluted 50/50)

ASTM D 3306

For heavy-duty diesel service:

ASTM D 5345 (prediluted 50/50)

ASTM D 4985

Texaco Extended Life Coolant System meets:

- Phosphate-free requirement of European OEMs
- Silicate-free requirement of Japanese OEMs
- Caterpillar EC-1
- Navistar B1, Type 3

Product Maintenance

Traditional phosphate and borate containing coolants exhibit high pH and reserve alkalinity (RA) when compared with Texaco Extended Life Coolant/Anti-Freeze. This comparison cannot be used to make conclusions about relative corrosion protection since the definition of RA is based upon the buffering curve of inhibitors that are not present in the coolant. Texaco Extended Life Coolant's unique corrosion inhibitor system is designed to protect aluminum and other system metals at lower pH levels than conventional coolants.

RA is defined as the amount in milliliters (mL), of 0.1 normal hydrochloric acid required to reduce the pH of 10 ml of antifreeze to 5.5.

A comparison of Texaco Extended Life Coolant/Anti-Freeze with traditional coolants is shown below:

	Texaco Extended Life Coolant/Anti-Freeze	Traditional antifreeze/coolant
Typical pH	8.3	10.5
Typical RA (mL)	6.0	12.0

This extended life coolant has low pH and RA relative to traditional coolants. The pH change profile in service is a more important performance measure than the RA level. Texaco Extended Life Coolant/Anti-Freeze shows a typical pH reduction of less than 1.5 units in 160,000-kilometer fleet tests compared with a pH reduction of up to 3 units for traditional coolants.

The American Society for Testing Materials (ASTM) has eliminated RA Level requirements in both key antifreeze specifications: ASTM D 3306 for automotive and ASTM D 4985 for heavy-duty engines. This action by the ASTM acknowledges that coolants that are not based on phosphate and borate can provide excellent corrosion protection for cooling system metals.

Texaco Extended Life Coolant/Anti-Freeze Pre-mixed 50/50 should be used as manufactured. No further dilution is recommended. For maximum protection against freezing in extremely cold areas, a 60 percent solution can be used. For improved freeze protection to -54°C adjust Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze by the table amounts with Texaco Extended Life Coolant/Anti-Freeze. Concentrations greater than 67 percent or less than 40 percent are not recommended.

Freeze Point Adjustments as Required by Ambient Conditions

Total System Capacity, litres	Amount of Concentrate, litres
5	1
10	2
15	3
20	4
25	5
30	6
35	7
40	8
45	9
50	10

Boiling and Freezing Protection for Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze

Boiling Protection, °C (15 lb pressure cap)	Freezing Protection, °C
129.4 C	-37.2 C

Because this product is silicate free, Texaco Extended Life Coolant/Anti-Freeze and Texaco Extended Life Pre-diluted 50/50 Coolant/Anti-Freeze can be stored at least 8 years with no problem provided the container integrity is maintained.

Always dispose of used coolant in accordance with local, state, provincial, and federal guidelines.

Handling Practices

Texaco recommends flushing your system with clean water if you have been using conventional coolants. If significant deposits are visible, use a commercial cooling system flush designed for your engine, follow the manufacturer's flushing procedure and dispose of properly. Flush with water twice afterwards. When changing Texaco Extended Life Prediluted 50/50 Coolant/Anti-Freeze after 600,000 miles of on-road use (six years or 12,000 hours of off-highway use), flush with clean water only. Do not use commercial flushes. In the event that a commercial flush is inadvertently used, completely flush the cooling system (twice) with clean water.

The primary limiting factor in the shelf life of a coolant is silicate instability. Since silicate will eventually polymerize to silicate gel, all traditional silicate-based coolants have a shelf life of about 18 months. Texaco Extended Life Coolant System is silicate-free and, therefore, can be stored for extended periods (up to 8 years) provided the integrity of the container is maintained.

Source: COOL-2230

Date: 02/05/2003

Copyright © 2001 - 2003 ChevronTexaco Corporation. All rights reserved.



Chevron HDAX® LFG Gas Engine Oil

Printable Salesfax-->



GEO-50.pdf

Click [MSDS](#) to search MSDS database.



Customer Benefits

Chevron HDAX LFG Gas Engine Oil delivers value through

Excellent corrosion control — Especially formulated to protect engines burning high C-F-C and high sulfur containing fuels, even under intermittent operating conditions where high levels of acidic condensate form.

Combustion chamber deposit control — Provides excellent corrosion control without the high ash levels which cause the excessive combustion chamber deposits which lead to preignition and detonation.

Valve recession control — Provides improved valve recession control over low ash formulations in those engines where medium ash oils are preferred.

Extended drain capability — Provides extended drain performance in conventional, sweet gas applications where used oil disposal concerns are especially important.

Clean pistons — API CD specification performance provides superior piston deposit control to prevent ring sticking and maintain clean, varnish-free piston skirts.

NSCR catalyst compatibility — Low phosphorus content means compatibility with Engelhard NSCR catalysts.

Minimum viscosity increase — Excellent oxidation and nitration resistance to ensure minimum viscosity increase.

Clean crankcases and top decks — Minimizes the formation of sludge in the crankcase and in the rocker cover/top-deck area.

Low wear — Provides excellent protection against corrosive wear, adhesive wear, and piston ring and liner scuffing and scoring.

Features

Chevron HDAX LFG Gas Engine Oil is a premium quality, medium ash, dispersant/detergent type gas engine oil formulated especially for landfill gas and sour gas applications.

It is formulated with ISOSYN™ base stocks and an additive package containing ashless dispersant, oxidation inhibitors, metallic detergents, a metallic antiwear additive, and a special combination of inhibitors to protect engines from the corrosive combustion byproducts encountered when landfill gas and sour gas are used.

Chevron HDAX LFG Gas Engine Oil provides outstanding corrosion resistance in landfill gas and sour gas applications, even when intermittent operation results in the formation of significant levels of acidic condensate. At 0.7 wt % ash, Chevron HDAX LFG Gas Engine Oil gives this performance without the higher levels of combustion chamber deposits associated with other products used in this application.

It also provides an extra measure of valve protection for those four-stroke engines where medium ash oils are preferred (e.g., Superior and Waukesha).

Chevron HDAX LFG Gas Engine Oil provides excellent piston deposit control to minimize the possibility of ring sticking.

Applications

Chevron HDAX LFG Gas Engine Oil is recommended for

- four-stroke engines fueled by landfill gas containing elevated levels of Chloro-Fluoro-Carbons (C-F-Cs)
- sour gas applications where corrosive wear is a special concern.
- engines where increased ash levels are preferred for improved valve recession control and head life.

The elevated base number and deposit control performance of Chevron HDAX LFG Gas Engine Oil make this premium oil especially suited for extended drain service in all four-stroke gas engines.

Chevron HDAX LFG Gas Engine Oil meets the performance requirements of **API Service Category CD¹**

¹ Obsolete

Chevron HDAX LFG Gas Engine Oil is approved by **Waukesha** for use in landfill applications.

Source: GEO-50

Date: 06/09/2003

Copyright © 2000, 2001, 2003 ChevronTexaco Corporation. All rights reserved.



Material Safety Data Sheet

Havoline® Automatic Transmission Fluid MERCON® V

MSDS: 8631

Revision #: 0 Revision Date: 10/10/01

Click here to search the [product data sheet](#) database

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TEXACO Havoline Automatic Transmission Fluid MERCON V

PRODUCT NUMBER(S): CPS222127

COMPANY IDENTIFICATION

Texaco Lubricants Company
or
6001 Bollinger Canyon Road, T3325/B10
San Ramon, CA 94583
CHEMTREC

EMERGENCY TELEPHONE NUMBERS

HEALTH (24 hr): (800)231-0623
(510)231-0623 (International)
TRANSPORTATION (24 hr):
(800)424-9300 or (703)527-3887
Emergency Information Centers
are located in U.S.A.
Int'l collect calls accepted

PRODUCT INFORMATION: MSDS Request: (800) 414-6737

Environmental, Safety & Health Info: (925) 842-5535

Product Information: (800) 582-3835

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % TEXACO Havoline Automatic Transmission Fluid MERCON V

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
------------	--------	-----------	-------------

LUBRICATING BASE OIL

SEVERELY REFINED PETROLEUM DISTILLATE

> 80.00%	5 mg/m3 (mist)	ACGIH TWA
	10 mg/m3 (mist)	ACGIH STEL
	5 mg/m3 (mist)	OSHA PEL

The BASE OIL may be a mixture of any of the following: CAS 64741884, CAS 64741895, CAS 64741964, CAS 64741975, CAS 64742014, CAS 64742525, CAS 64742536, CAS 64742547, CAS 64742558, CAS 64742570, CAS 64742627, CAS 64742650, or CAS 72623837.

ADDITIVES INCLUDING THE FOLLOWING:

< 20.00%

COMPOSITION COMMENT:

All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5 mg/m3.

3. HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS

EYE:

Not expected to cause prolonged or significant eye irritation.

SKIN:

Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

INGESTION:

Not expected to be harmful if swallowed.

INHALATION:

Contains a petroleum-based mineral oil. May cause respiratory irritation other pulmonary effects following prolonged or repeated inhalation of mist at airborne levels above the recommended mineral oil mist exposure limit.

4. FIRST AID MEASURES

EYE:

No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, worn, and flush eyes with water.

SKIN:

No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

INGESTION:

No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION:

If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

NOTE TO PHYSICIANS:

In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a emergency center is recommended.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

FIRE COMMENT:

Leaks/ruptures in high pressure systems using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. Open flame, pilot lights, sparks, or electric arcs).

FLAMMABLE PROPERTIES:

FLASH POINT: (COC) 378F (192C)

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA Upper: NA

EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam, Water Fog

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur and nitrogen. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887

International Collect Calls Accepted

ACCIDENTAL RELEASE MEASURES:

Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove soil. Follow prescribed procedures for reporting and responding to larger releases.

7. HANDLING AND STORAGE

DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers product residue (solid, liquid, and/or vapor) and can be dangerous. not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers be completely drained, properly closed, and promptly returned to a reconditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 3), 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. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Special Note: Do not use in breathing air apparatus or medical equipment.

ENGINEERING CONTROLS:

Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

SKIN PROTECTION:

No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Nitrile> <Silver Shield> <Viton> <4H>

RESPIRATORY PROTECTION:

No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the recommended mineral oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations this material. Use the following elements for air-purifying respirators: particulate.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:

Red liquid with mild petroleum odor.

pH: NA

VAPOR PRESSURE: <0.01 mm Hg @ 100F

VAPOR DENSITY
(AIR=1): >1

BOILING POINT: >315.5C

FREEZING POINT: NA

MELTING POINT: NA

SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.

SPECIFIC GRAVITY: 0.85 @ 15.6/15.6C

VISCOSITY: 7.3 cSt @ 100C (Typ.)

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
None known.

CHEMICAL STABILITY:
Stable.

CONDITIONS TO AVOID:
No data available.

INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

HAZARDOUS POLYMERIZATION:
Polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:

The eye irritation hazard is based on data for a similar material.

SKIN EFFECTS:

The skin irritation hazard is based on data for a similar material.

ACUTE ORAL EFFECTS:

The acute oral toxicity is based on data for a similar material.

ACUTE INHALATION EFFECTS:

The acute respiratory toxicity is based on data for a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.

ENVIRONMENTAL FATE:

This material is not expected to be readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales

representative or local environmental or health authorities for approved disposal or methods.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for description requirements (e.g., technical name) and -specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NONE

DOT HAZARD CLASS: NONE

DOT IDENTIFICATION NUMBER: NONE

DOT PACKING GROUP: N/A

ADDITIONAL INFO: Petroleum Lubricating Oil - Not Hazardous by U.S. DOT.

ADR/RID Hazard class - Not applicable.

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects:	NO
2. Delayed (Chronic) Health Effects:	NO
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01=SARA 313	11=NJ RTK	22=TSCA Sect 5(a)(2)
02=MASS RTK	12=CERCLA 302.4	23=TSCA Sect 6
03=NTP Carcinogen	13=MN RTK	24=TSCA Sect 12(b)
04=CA Prop 65-Carcin	14=ACGIH TWA	25=TSCA Sect 8(a)
05=CA Prop 65-Repro Tox	15=ACGIH STEL	26=TSCA Sect 8(d)
06=IARC Group 1	16=ACGIH Calc TLV	27=TSCA Sect 4(a)
07=IARC Group 2A	17=OSHA PEL	28=Canadian WHMIS
08=IARC Group 2B	18=DOT Marine Pollutant	29=OSHA CEILING
09=SARA 302/304	19=Chevron TWA	30=Chevron STEL
10=PA RTK	20=EPA Carcinogen	31=OSHA STEL

The following components of this material are found on the regulatory lists indicated.

SEVERELY REFINED PETROLEUM DISTILLATE
is found on lists: 14,15,17,

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows:

PETROLEUM OIL

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

16. OTHER INFORMATION

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;

HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

REVISION STATEMENT:
This is a new Material Safety Data Sheet.

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	TPQ - Threshold Planning Quantity
RQ - Reportable Quantity	PEL - Permissible Exposure Limit
C - Ceiling Limit	CAS - Chemical Abstract Service
Number	
A1-5 - Appendix A Categories	() - Change Has Been Proposed
NDA - No Data Available	NA - Not Applicable

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may modify the information, we do not assume any responsibility for the results of its use. This information is furnished upon that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

THIS IS THE LAST PAGE OF THIS MSDS
