



Material Safety Data Sheet

- Click on the product name to go to the Salesfax description sheet.
- Click on the grade to go to the Salesfax typical test data sheet.

Chevron LS Diesel 2(only grade)

MSDS: 6894 Revision #: 0 Revision Date: 07/17/99

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DIESEL FUEL NO. 2

PRODUCT NUMBER(S):	CPS220122	CPS225114	CPS225115	CPS225150
	CPS266176	CPS270005	CPS271006	CPS272093
	CPS272102	CPS272126	CPS272152	CPS272185
	CPS272190	CPS272593	CPS272601	CPS272693
	CPS272793	CPS273003	CPS273030	CPS273053

SYNONYM: CALCO LS Diesel 2
 CHEVRON LS Diesel 2
 Diesel Fuel Oil
 Gas Oil
 HS Diesel 2
 HS Heating Fuel 2
 LS Diesel 2
 LS Heating Fuel 2
 Marine Diesel
 RR Diesel Fuel

COMPANY IDENTIFICATION

CHEVRON PRODUCTS COMPANY
 575 Market St.
 San Francisco, Ca 94105-2856

EMERGENCY TELEPHONE NUMBERS

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

PRODUCT INFORMATION: MSDS Requests
 (800) 689-3998
 (510) 242-5357 Technical Information

SPECIAL NOTES: This MSDS covers all Chevron and Calco non-CARB Diesel No.2 Fuels. The sulfur content is less than 0.5% (mass). Red dye is added to non-taxable fuel.

2. COMPOSITION/INFORMATION ON INGREDIENTS

100.0 % DIESEL FUEL NO. 2

CONTAINING

COMPONENTS	AMOUNT	LIMIT/QTY	AGENCY/TYPE
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DIESEL FUEL NO. 2

Chemical Name: FUELS, DIESEL, NO. 2
CAS68476346 100.00%

NONE NA

POTENTIALLY

INCLUDING

HDS DISTILLATE, MIDDLE

Chemical Name: DISTILLATES, HYDRODESULFURIZED MIDDLE
CAS64742809

NONE NA

GAS OIL, LIGHT

Chemical Name: DISTILLATES, STRAIGHT RUN MIDDLE
CAS64741442

NONE NA

KEROSENE

Chemical Name: Kerosine
CAS8008206

NONE NA

HYDRODESULFURIZED KEROSENE

Chemical Name: Kerosine, HYDRODESULFURIZED
CAS64742810

NONE NA

CAT CRACKED DISTILLATE, LIGHT

Chemical Name: DISTILLATES, LIGHT CATALYTIC CRACKED
CAS64741599

NONE NA

TOTAL SULFUR, MASS %
< 0.50%

COMPOSITION COMMENT:

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

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****

Clear to pale yellow liquid if undyed, red liquid if dyed.

- COMBUSTIBLE LIQUID AND VAPOR
- HARMFUL OR FATAL IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE
- CAUSES SKIN IRRITATION
- POSSIBLE CANCER HAZARD - CONTAINS MATERIAL THAT MAY CAUSE CANCER BASED ON ANIMAL DATA

IMMEDIATE HEALTH EFFECTS

EYE:

Not expected to cause prolonged or significant eye irritation.

SKIN:

Contact with the skin causes irritation.

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:

Excessive or prolonged breathing of this material may cause central nervous system effects. Mists of this material may cause respiratory

irritation.

SIGNS AND SYMPTOMS OF EXPOSURE:

Skin irritation: may include pain, reddening, swelling, and blistering.
Respiratory irritation: may include coughing and difficulty breathing.
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.

CARCINOGENICITY:

Prolonged or repeated skin contact with this material may cause cancer based on animal data. Risk of cancer depends on duration and level of exposure. See Section 11 for additional information.

Whole diesel engine exhaust was reviewed by the International Agency for Research on Cancer (IARC) in their Monograph 46 (1989). Evidence for causing cancer was considered sufficient in animals and limited in humans. IARC placed diesel exhaust in category 2A, considering it probably carcinogenic to humans.

Diesel exhaust is known to the State of California to cause cancer.

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, if worn, and flush eyes with water.

SKIN:

Wash skin immediately with soap and water and remove contaminated clothing and shoes. Get medical attention if irritation persists. Discard contaminated clothing and shoes or thoroughly clean before reuse.

INGESTION:

If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. 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 symptoms continue.

NOTE TO PHYSICIANS:

Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Combustible liquid. See section 7 for appropriate handling and storage conditions.

FLAMMABLE PROPERTIES:

FLASH POINT: (P-M) 125F (52C) Minimum

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: 0.6 Upper: 4.7

EXTINGUISHING MEDIA:

CO2, Dry Chemical, AFFF Foam.

NFPA RATINGS: Health 0; Flammability 2; Reactivity 0.

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:

Normal combustion forms carbon dioxide and water vapor; 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:

Eliminate all sources of ignition in the vicinity of the spill or released vapor.

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 contaminated soil. Follow prescribed procedures for reporting and responding to larger releases. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material.

Release of this product should be prevented from contaminating soil and water and from entering drainage and sewer systems. U.S.A. regulations require reporting spills of this material that could reach any surface waters. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

7. HANDLING AND STORAGE

Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive force. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85F.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, 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 American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents" and/or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity.

Do not use or store near heat, sparks, or open flames. Use or store only in a well-ventilated area. Keep container closed when material is not in use. 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 properly disposed of.

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

Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Keep out of reach of children.

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

If user operations generate airborne material, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

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> <Viton> <Chlorinated Polyethylene (or Chlorosulfonated Polyethylene or CPE)> <Polyurethane>

RESPIRATORY PROTECTION:

If user operations generate harmful levels of airborne material that is not adequately controlled by ventilation, wear a NIOSH approved respirator that provides adequate protection. Use the following elements for air-purifying respirators: Organic Vapor.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:

Clear to pale yellow liquid if undyed, red liquid if dyed.

pH:	NDA
VAPOR PRESSURE:	0.04 PSIA @ 40C
VAPOR DENSITY (AIR=1):	NDA
BOILING POINT:	176 - 370C (348-698F)
FREEZING POINT:	NDA
MELTING POINT:	NA
SOLUBILITY:	Soluble in hydrocarbon solvents; insoluble in water.
SPECIFIC GRAVITY:	0.84 @ 15.6/15.6C (Typical)
VISCOSITY:	1.9 - 4.1 cSt @ 40C

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:

None known

CHEMICAL STABILITY:

Stable.

CONDITIONS TO AVOID:

See section 7.

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:

Minimal effects clearing in less than 24 hours.

SKIN EFFECTS:

Moderate irritation at 72 hours. (Moderate erythema). The acute dermal LD50 in rabbits is >5 ml/kg. This material did not cause skin sensitization reactions in a Buehler guinea pig test.

ACUTE ORAL EFFECTS:

The acute oral LD50 in rats is > 5 ml/kg.

ACUTE INHALATION EFFECTS:

The 4-hour inhalation LC50 in rats is > 5 mg/l.

The data above is obtained from studies sponsored by the American Petroleum Institute.

CHRONIC EFFECTS/CARCINOGENICITY:

This product contains a mixture of petroleum hydrocarbons called middle distillates (which means they boil between approximately 350F and 700F). Because of this broad description, many products are considered middle distillates yet they are produced by a variety of different petroleum refining processes. Toxicology data developed on some middle distillates found that they caused positive responses in some mutagenicity tests and caused skin cancer when repeatedly applied to mice over their lifetime. This product may contain some middle distillates found to cause those adverse effects.

This product may contain significant amounts of polynuclear aromatic hydrocarbons (PAH's) which have been shown to cause skin cancer after prolonged and frequent contact with the skin of test animals. Brief or intermittent skin contact with this product is not expected to have serious effects if it is washed from the skin. While skin cancer is unlikely to occur in human beings following use of this product, skin contact and breathing of mists or vapors should be reduced to a minimum.

This product contains kerosene. CONCAWE (product dossier 94/106) has summarized current health, safety and environmental data available for a number of kerosenes (typically straight-run kerosene, CAS 8008-20-6, or hydrodesulfurized kerosene, CAS 64742-81-0). Following acute exposure to kerosene, signs observed in rats and rabbits were of a low order of toxicity: central nervous system depression occurred following oral exposure, skin irritation (ranging from slight to severe irritation) occurred with dermal exposure, and respiratory tract irritation occurred with inhalation exposure. None of the kerosenes tested produced more than slight eye irritation and none were skin sensitizers. However, intratracheal administration or artificial aspiration of small volumes (0.1 to 0.2 ml) of kerosene into the lungs of rats, chickens and primates resulted in lung damage and/or death. Chronic (3 to 24 months) mouse dermal toxicity studies of kerosenes and jet fuels produced mild to moderate skin irritation, while long-term (2+ years) studies showed moderate to severe skin damage as well as an increased incidence of tumors after long latency periods (probably due to a secondary mechanism related to skin irritancy). In a study in which rats, mice, rabbits and cats were exposed to kerosene aerosol concentrations in the range 0.05 to 120 mg/l for up to four weeks, reductions in respiratory rate, pulmonary hyperaemia, leucocytosis, monocytosis and decreased erythrocyte sedimentation rate were observed, and histological examination revealed inflammatory changes in the respiratory tract (tracheitis, bronchitis and

pneumonia).

Hydrodesulfurized kerosene was tested by the Petroleum Product Stewardship Council in a OECD Guideline 421 Reproductive/Developmental Toxicity Study. The kerosene sample was diluted to 494 (60%), 330 (40%), and 165 (20%) mg/kg/day in food grade mineral oil and applied daily during pre-mating and mating to day 19 of gestation. There was no apparent maternal, reproductive, or developmental toxicity at any dose. Males treated for eight weeks had increased relative kidney weights in the high dose group but no microscopic changes in testes or epididymides. No gross anomalies were observed in the pups.

The National Institute of Occupational Safety and Health (NIOSH) has recommended that whole diesel exhaust be regarded as potentially causing cancer. This recommendation was based on test results showing increased lung cancer in laboratory animals exposed to whole diesel exhaust.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

A series of studies on the acute toxicity of 4 diesel fuel samples were conducted by one laboratory using water accommodated fractions. The range of effective (EC50) or lethal concentrations (LC50) expressed as loading rates were: The 96-hour LC50 for rainbow trout (*Salmo gairdneri*) is 21-210 mg/l. The 48-hour EC50 for daphnia (*Daphnia magna*) is 20-210 mg/l. The 72-hour EC50 in alga (*Raphidocellus subcapitata*) is 2.6-25 mg/l.

ENVIRONMENTAL FATE:

On release to the environment the lighter components of diesel fuel will generally evaporate but depending on local environmental conditions (temperature, wind, mixing or wave action, soil type, etc.) the remainder may become dispersed in the water column or absorbed to soil or sediment. Diesel fuel would not be expected to be "readily biodegradable". In a modified Strum test (OECD method 301B) approximately 40% biodegradation was recorded over 28 days. However, it has been shown that most hydrocarbon components of diesel fuel are degraded in soil in the presence of oxygen. Under anaerobic conditions, such as in anoxic sediments, rates of biodegradation are negligible.

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 USEPA under RCRA (40CFR261) 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.

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: GAS OIL
DOT HAZARD CLASS: COMBUSTIBLE LIQUID
DOT IDENTIFICATION NUMBER: UN1202
DOT PACKING GROUP: III

15. REGULATORY INFORMATION

SARA 311 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:

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	

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

KEROSINE

is found on lists: 02,10,11,

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:

DIESEL FUEL

WHMIS CLASSIFICATION:

Class B, Division 3: Combustible Liquids
 Class D, Division 2, Subdivision B: Toxic Material
 -Skin or Eye Irritation

16. OTHER INFORMATION

NFPA RATINGS: Health 0; Flammability 2; 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 which consolidates and replaces all previous MSDS's for Diesel Fuels.

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 suggest modification 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.

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