Material Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

AVIATION GASOLINE

Product Use: Fuel

Product Number(s): CPS200205, CPS200239, CPS200285, CPS200456

Synonyms: Avgas 100, Avgas 100 LL

Company Identification

Chevron Global Aviation

a division of Chevron U.S.A., Inc.

1500 Louisiana St.

Houston, TX 77002

United States of America

Transportation Emergency Response

CHEMTREC: +1 800-424-9300 or +1 703-527-3887

Health Emergency

Chevron Emergency Information Center: Emergency Information Centers are located in the USA. International collect calls accepted. +1 800-231-0623 or +1 510-231-0623

Product Information

Product Information: +1 510-242-5357 (USA)

MSDS Requests: +1 800-689-3998 (USA)

SECTION 2 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS CAS NUMBER AMOUNT

Aviation Gasoline 100 %volume

Naphtha, light alkylate 64741-66-8 70 - 100 %volume

Naphtha, isomerization 64741-70-4 0 - 10 %volume
Toluene 108-88-3 0 - 20 %volume
Benzene 71-43-2 0 - 1 %volume
Tetraethyl lead 78-00-2 < 4 ml/gal
Ethylene dibromide 106-93-4 < 4 ml/gal

Information on ingredients that are considered Controlled Products and/or that appear on the WHMIS Ingredient Disclosure List (IDL) is provided as required by the Canadian Hazardous Products Act (HPA, Sections 13 and 14). Ingredients considered hazardous under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, are also listed. See Section 15 for additional regulatory information.

SECTION 3 HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW
- EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE
- HARMFUL OR FATAL IF SWALLOWED - MAY CAUSE LUNG DAMAGE IF SWALLOWED
- CAUSES EYE AND SKIN IRRITATION
- MAY CAUSE RESPIRATORY TRACT IRRITATION IF INHALED
- VAPOR HARMFUL
- SUSPECT CANCER HAZARD - MAY CAUSE CANCER
- BIRTH DEFECT HAZARD - CONTAINS MATERIAL THAT MAY CAUSE BIRTH DEFECTS
- MAY CAUSE DAMAGE TO:
- NERVOUS SYSTEM
- AUDITORY SYSTEM
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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. 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. May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause adverse reproductive effects if inhaled.

Cancer: Prolonged or repeated exposure to this material may cause cancer. 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 ethylene dibromide which has been classified as a Group 2A carcinogen 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).

Contains benzene, which has been classified as an A1 Group Confirmed Human Carcinogen by the American Conference of Governmental Industrial Hygienists (ACGIH).

Target Organs: Repeated inhalation of this material at concentrations above the recommended exposure limit may cause damage to the following organ(s) based on animal data: Nervous System, Auditory System

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

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.

FLAMMABLE PROPERTIES:

Flashpoint: (Tagliabue Closed Cup ASTM D56) -46 °C (-51 °F) (Min)

Autoignition: 440 °C (824 °F)

Flammability (Explosive) Limits (% by volume in air): Lower: 1.2 Upper: 7

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: 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 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures: 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. 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.

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 and accumulating an 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'.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces . 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: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Nitrile Rubber, Polyurethane, Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Viton.

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.

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

Occupational Exposure Limits:

Component Country/Agency TWA STEL Ceiling Notation

Aviation Gasoline CVX 200 ppm 1000 ppm -- --
Benzene ACGIH .5 ppm (weight) 2.5 ppm (weight) -- Skin A1 Skin
Benzene CVX 1 ppm (weight) 5 ppm (weight) -- --
Tetraethyl lead ACGIH .1 mg/m3 -- -- Skin as Pb
Toluene ACGIH 50 ppm (weight) -- -- Skin A4

NOTE ON OCCUPATIONAL EXPOSURE LIMITS: Consult local authorities for acceptable provincial values in Canada. Consult the Canadian Standards Association Standard 94.4-2002 Selection, Use and Care of Respirators.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES
Attention: the data below are typical values and do not constitute a specification.

Color: Blue or green dyed

Physical State: Liquid

Odor: Petroleum odor

pH: Not Applicable

Vapor Pressure: 38 - 49 kPa @ 38 °C (100.4 °F)

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

Boiling Point: 60°C (140°F) - 170°C (338°F)

Solubility: Low PPM range in water.

Freezing Point: -58°C (-72.4°F) (Max)

Specific Gravity: 0.65 - 0.75 @ 15°C (59°F)

Viscosity: <1 SUS @ 37.8°C (100°F)

Odor Threshold: No Data Available

Coefficient of Water/Oil Distribution: No Data Available

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 acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: None known (None expected)

Hazardous Polymerization: Hazardous polymerization will not occur.

Sensitivity to Mechanical Impact: No.

SECTION 11 TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Eye Irritation: The eye irritation hazard is based on evaluation of data for similar materials or product components.
Skin Irritation: The skin irritation hazard is based on evaluation of data for similar materials or product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials or product components.

Acute Dermal Toxicity: LD50: >3.75g/kg (rabbit). The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Oral Toxicity: LD50: >5 ml/kg (rat) The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components. For additional information on the acute toxicity of the components, call the technical information center.

ADDITIONAL TOXICOLOGY INFORMATION:

This product contains light alkylate naphtha. An inhalation study in rats found no adverse effects on male or female reproductive abilities and no birth defects in pups born to the exposed mothers. This study was done with that portion of light alkylate naphtha that distilled below 145 F (C4 to C6 hydrocarbons). The concentrations used in the study were up to 25,000 mg/m3 which is 60% of the lower explosive limit. That dose was also the no-observed-adverse-effect level.

This product contains benzene.

GENETIC TOXICITY/CANCER: Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

OCCUPATIONAL: The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains toluene.

GENERAL TOXICITY: The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm)
for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent
central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision
loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac
arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac
tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal
testing with toluene do not support these as primary target organs.

HEARING: Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm
for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using
behavioral and electrophysiological testing as well as by observation of structural damage to cochlear
hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure
and noise may interact to produce hearing deficits.

COLOR VISION: In a single study of workers exposed to toluene at levels under 50 ppm, small decreases
in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This
effect, which should be investigated further, is very subtle and would not likely have been noticed by the
people tested.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY: Toluene may also cause mental and/or growth retardation
in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm)
when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at
doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth
defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals.
The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat
and 500 ppm in the rabbit.

This material contains organic lead. Organic lead (as Pb) is toxic by ingestion, inhalation, and skin
contact. Signs and symptoms of chronic or subacute poisoning may initially include insomnia and
restlessness; progressing into nausea, vomiting, loss of appetite, dizziness, abnormal blood pressure and
temperature, increased respiratory rate, and skin pallor. In addition, continued exposure or acute
poisoning may result in weakness, loss of weight, visual and auditory hallucinations, violent or maniacal
type attacks, increased excitability, coarse tremors, convulsions and death.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

The ecotoxicity hazard is based on data for a similar material.

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.

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 USEPA under RCRA (40CFR261), Environment Canada, or other State, Provincial, 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.

TC Shipping Description: UN1203, GASOLINE, 3, II, MARINE POLLUTANT(GASOLINE LEADED)

IMO/IMDG Shipping Description: UN1203, GASOLINE, 3, II, MARINE POLLUTANT(GASOLINE LEADED), FLASH POINT SEE SECTION 5

ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

DOT Shipping Description: GASOLINE, 3, UN1203, II, MARINE POLLUTANT (LEADED GASOLINE), RQ (LEAD)

SECTION 15 REGULATORY INFORMATION

REGULATORY LISTS SEARCHED: 01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
35=WHMIS IDL

The following components of this material are found on the regulatory lists indicated. Benzene 01-1, 35
Ethylene dibromide 01-2A, 35
Tetraethyl lead 35
Toluene 35
CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), EINECS (European Union), IECSC (China), KECI (Korea), TSCA (United States).

WHMIS CLASSIFICATION:

Class B, Division 2: Flammable Liquids

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

Chronic Toxic Effects

Teratogenicity and Embryotoxicity

Carcinogenicity

Class D, Division 2, Subdivision B: Toxic Material -

Skin or Eye Irritation

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations. (See Hazardous Products Act (HPA), R.S.C. 1985, c.H-3,s.2).

MSDS PREPARATION:

This Material Safety Data Sheet has been prepared by the Toxicology and Health Risk Assessment Unit, ERTC, P.O. Box 1627, Richmond, CA 94804, (888)676-6183.

Revision Date: February 26, 2008

SECTION 16 OTHER INFORMATION

REVISION STATEMENT: This revision updates the following sections of this Material Safety Data Sheet: 1.

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

ACGIH - American Conference of Government Industrial Hygienists

IMO/IMDG - International Maritime Dangerous Goods Code

API - American Petroleum Institute

MSDS - Material Safety Data Sheet
CVX - Chevron NFPA - National Fire Protection Association (USA)

DOT - Department of Transportation (USA) NTP - National Toxicology Program (USA)

IARC - International Agency for Research on Cancer OSHA - Occupational Safety and Health Administration

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.