```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                         M S D S                          *
*                                                          *
*  Canadian Centre for Occupational Health and Safety      *
* * * * * * * * * * * * * Issue : 2000-1 (February, 2000)  *
```

*** IDENTIFICATION ***

MSDS RECORD NUMBER	: 469097
PRODUCT NAME(S)	: CHEVRON RPM Arctic Gear Lubricant SAE 75W-90
PRODUCT IDENTIFICATION	: PRODUCT NUMBER(S): CPS250412 MSDS Number: 004726
DATE OF MSDS	: 1991-02-09

***

Message from Chevron Canada Limited: The information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent as 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.

*** SUPPLIER/DISTRIBUTOR INFORMATION ***

SUPPLIER/DISTRIBUTOR	: CHEVRON CANADA LIMITED
ADDRESS	: 1500 - 1050 West Pender Street Vancouver British Columbia Canada V6E 3T4 Telephone: 604-668-5300
EMERGENCY TELEPHONE NO.	: 800-457-2022 510-233-3737

*** MATERIAL SAFETY DATA ***

Material Safety Data Sheet

CHEVRON RPM Arctic Gear Lubricant SAE 75W-90

CPS250412

This Material Safety Data Sheet contains environmental, health and toxicology information for your employees. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information incorporated in your MSDS.

This is a new Material Safety Data Sheet

---

1. PRODUCT IDENTIFICATION

CHEVRON RPM Arctic Gear Lubricant SAE 75W-90

- A HAZARD WARNING IS NOT REQUIRED FOR THIS PRODUCT UNDER OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

PRODUCT NUMBER(S): CPS250412
PRODUCT INFORMATION: (800)582-3835

---

2. FIRST AID

EYE CONTACT:
No first aid procedures are required. However, as a precaution flush eyes with fresh water for 15 minutes. Remove contact lenses if worn.
SKIN CONTACT:
No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.
INHALATION:
Since this material is not expected to be an immediate inhalation problem, no first aid procedures are required.
INGESTION:
If swallowed, give water or milk to drink and telephone for medical advice. Consult medical personnel before inducing vomiting. If medical advice cannot be obtained, then take the person and product container to the nearest medical emergency treatment center or hospital.

---

3. IMMEDIATE HEALTH EFFECTS - (ALSO SEE SECTIONS 11 & 12)

EYE CONTACT:
This substance is not expected to cause prolonged or significant eye irritation. This hazard evaluation is based on the data from similar materials.
SKIN IRRITATION:
This substance is not expected to cause prolonged or significant skin irritation. This hazard evaluation is based on data from similar materials.
DERMAL TOXICITY:
The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if it gets on the skin. This hazard evaluation is based on data from similar materials.
RESPIRATORY/INHALATION:
The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if inhaled. This hazard evaluation is based on data from similar materials.
INGESTION:
The systemic toxicity of this substance has not been determined. However, it should be practically non-toxic to internal organs if swallowed. This hazard evaluation is based on data from similar materials.

---

4. PROTECTIVE EQUIPMENT

EYE PROTECTION:
No special eye protection is usually necessary.
SKIN PROTECTION:
No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing.
RESPIRATORY PROTECTION:
No special respiratory protection is normally required. However, if operating

conditions create high airborne concentrations, the use of an approved respirator is recommended.
VENTILATION:
Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

5. FIRE PROTECTION

FLASH POINT: (COC) 320F (160C)
AUTOIGNITION: NDA
FLAMMABILITY: (% by volume in air): Lower: NDA Upper: NDA
EXTINGUISHING MEDIA:
CO2, dry chemical, foam and water fog.
NFPA RATINGS: Health 0; Flammability 1; Reactivity 0; Special NDA;
(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association or, if applicable, the National Paint and Coating Association, and do not necessarily reflect the hazard evaluation of the Chevron Environmental Health Center. Read the entire document and label before using this product.
FIRE FIGHTING PROCEDURES:
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. STORAGE, HANDLING, AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
NDA
STABILITY:
Stable.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.
INCOMPATIBILITY:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
SPECIAL PRECAUTIONS:
DO NOT weld, heat or drill container. Residue may ignite with explosive violence if heated sufficiently. CAUTION! Do not use pressure to empty drum or explosion may result.

7. PHYSICAL PROPERTIES

SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.

APPEARANCE:
BOILING POINT: NDA
MELTING POINT: NDA
EVAPORATION: NDA
SPECIFIC GRAVITY: NDA
VAPOR PRESSURE: NDA
PERCENT VOLATILE (VOLUME %): NDA
VAPOR DENSITY (AIR=1): NDA

8. ENVIRONMENTAL CONCERNS, SPILL RESPONSE AND DISPOSAL

CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300 (24 hour).
SPILL/LEAK PRECAUTIONS:
This material is not expected to present any environmental problems other than those associated with oil spills.

Stop the source of the leak or release. Clean up releases as soon as possible. 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.
DISPOSAL METHODS:
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.

9. EXPOSURE STANDARDS, REGULATORY LIMITS AND COMPOSITION

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.

The percent compositions are given to allow for the various ranges of the components present in the whole product and may not equal 100%.

PERCENT/CAS#	COMPONENT/REGULATORY LIMITS
100.0%	CHEVRON RPM Arctic Gear Lubricant SAE 75W-90
CONTAINING	
> 60.0%	LUBRICATING BASE OIL CONTAINING ONE OR MORE OF THE FOLLOWING
CAS64741975	DISTILLATES, SOLVENT REFINED LIGHT
CAS72623837	HYDROTREATED BRIGHT STOCK BASE OIL
< 40.0%	ADDITIVES

TLV - Threshold Limit Value
STEL - Short-term Exposure Limit
RQ - Reportable Quantity
CC - Chevron Chemical Company
TWA - Time Weighted Average
TPQ - Threshold Planning Quantity
CPS - CUSA Product Code
CAS - Chemical Abstract Service Number

10. REGULATORY INFORMATION

DOT SHIPPING NAME: NOT DESIGNATED AS A HAZARDOUS MATERIAL BY THE FEDERAL DOT
DOT HAZARD CLASS: NOT APPLICABLE
DOT IDENTIFICATION NUMBER: NOT APPLICABLE

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

None of the components of this material are found on the regulatory lists shown below.

REGULATORY LISTS SEARCHED:

01=SARA 313	02=MASS RTK	03=NTP Carcinogen
04=CA Prop. 65	05=MI 406	06=IARC Group 1
07=IARC Group 2A	08=IARC Group 2B	09=SARA 302/304
10=PA RTK	11=NJ RTK	12=CERCLA 302.4
13=MN RTK	14=ACGIH TLV	15=ACGIH STEL
16=ACGIH Calculated TLV	17=OSHA TWA	18=OSHA STEL
19=Chevron TLV	20=EPA Carcinogen	21=TSCA Sect 4(e)
22=TSCA Sect 5(a)(e)(f)	23=TSCA Sect 6	24=TSCA Sect 12(b)
25=TSCA Sect 8(a)	26=TSCA Sect 8(d)	28=Canadian WHMIS
29=OSHA CEILING		

11. PRODUCT TOXICOLOGY DATA

EYE IRRITATION:
No product toxicology data available. The hazard evaluation was based on data from similar materials.
SKIN IRRITATION:
No product
toxicology data available. The hazard evaluation was based on data from similar materials.
DERMAL TOXICITY:
No product toxicology data available. The hazard evaluation was based on data from similar materials.
RESPIRATORY/INHALATION:
No product toxicology data available. The hazard evaluation was based on data from similar materials.
INGESTION
No product toxicology data available. The hazard evaluation was based on data from similar materials.

12. ADDITIONAL HEALTH DATA

ADDITIONAL HEALTH DATA COMMENT:
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 the 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).

Revision Number: 0 Revision Date: 02/09/91 MSDS Number: 004726
NDA - No Data Available NA - Not Applicable

Prepared According to the OSHA Hazard Communication Standard (29 CFR 1910.1200) by the Chevron Environmental Health Center, Inc., P.O. Box 4054, Richmond, CA 94804.

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                          M S D S                              *
*                                                               *
*  Canadian Centre for Occupational Health and Safety           *
* * * * * * * * * * * * * Issue : 2000-1 (February, 2000)       *
```

*** IDENTIFICATION ***

MSDS RECORD NUMBER	: 1712194
PRODUCT NAME(S)	: AVIATION GASOLINE 100 LL Blue Avgas 1527 - Conoco base code
PRODUCT IDENTIFICATION	: GASP0145
DATE OF MSDS	: 1998-05-04

*** MANUFACTURER INFORMATION ***

MANUFACTURER	: Conoco, Inc
ADDRESS	: Post Office Box 2197 Houston Texas U.S.A. 77252 Telephone: 281-293-5550 (Product Information)
EMERGENCY TELEPHONE NO.	: 800-424-9300 (Transport, CHEMTREC) 800-441-3637 (Medical)

***

Message from Conoco Inc: The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

*** SUPPLIER/DISTRIBUTOR INFORMATION ***

SUPPLIER/DISTRIBUTOR	: Conoco, Inc
ADDRESS	: Post Office Box 2197 Houston Texas U.S.A. 77252 Telephone: 281-293-5550 (Product Information)
EMERGENCY TELEPHONE NO.	: 800-424-9300 (Transport, CHEMTREC) 800-441-3637 (Medical)

*** MATERIAL SAFETY DATA ***

CHEMICAL PRODUCT IDENTIFICATION

Tradenames and Synonyms
Blue Avgas
1527 - Conaco base code

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Gasoline		100
including:		
Benzene	71-43-2	<0.1
* Toluene	108-88-3	<10
* Ethyl Benzene	100-41-4	<2
* p-Xylene	106-42-3	<3
* m-Xylene	108-38-3	<6
* o-Xylene	95-47-6	<3
* 1,2,4-Trimethyl Benzene	95-63-6	<3
Tetraethyl Lead	78-00-2	0.07

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects
#

Primary Routes of Entry: Skin, inhalation

The product may cause irritation to the eyes, nose, throat, lungs, and skin after prolonged or repeated exposure. Extreme overexposure or aspiration into the lungs may cause lung damage or death. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects; greater overexposure may cause dizziness, slurred speech, flushed face, unconsciousness, and convulsions.

Inhalation of xylene can cause nausea, headache, weakness, dizziness, confusion, incoordination, and loss of consciousness; skin sensitization has occasionally occurred. Ingestion can cause gastrointestinal irritation and symptoms of central nervous system depression; aspiration into the lungs may be lethal. High exposures can cause skin, eye, nose, and throat irritation; heart stress; anemia; respiratory difficulties; bleeding from mucosal surfaces; liver and kidney effects; and death.

Studies of industry employees have indicated that workers exposed many years to high concentrations of benzene have a higher incidence of acute myelogenous leukemia. Benzene can also be toxic to the blood and blood-forming tissues.

Combustion Product - Carbon Monoxide:

Carbon monoxide decreases the ability of the blood to carry oxygen.

Inhalation may cause headache, nausea, rapid respirations, vomiting, dizziness, confusion, impaired judgement, personality changes, memory impairment, weakness, shortness of breath, unconsciousness, convulsions and death if not treated. It may cause chest pains in persons with heart disease. Carbon monoxide poisoning can cause pallor (whiteness) or cyanosis (blueness) of the skin and extremities.

High exposure to carbon monoxide may cause heart irregularities.

Carbon monoxide may adversely affect the unborn babies of pregnant women.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Material	IARC	NTP	OSHA	ACGIH
Benzene	1	X	X	A1

DuPont controls the following materials as carcinogens:
Benzene.

FIRST AID MEASURES

First Aid

INHALATION
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT
In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.
If irritation develops, consult a physician.

EYE CONTACT
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION
If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 mL water and mix well. Administer 5 mL/kg, or 350 mL for an average adult.

THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRHYTHMIAS. Catecholamines such as adrenaline, and other compounds having similar effects, should be reserved for emergencies and then used only with special caution.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point	<-40 F (<-40 C)
Method	TCC
Flammable limits in Air, % by Volume	
LEL	1.5
UEL	7.3

Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back.

Extinguishing Media
Foam, Dry Chemical, CO2.

Fire Fighting Instructions
Water may be ineffective to extinguish, but water should be used to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Water spray may be used to flush spills away from areas of potential ignition.

Highly Flammable. Products of combustion may contain carbon monoxide, carbon dioxide and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)
NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Remove source of heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools. If equipment is used for spill cleanup, it must be explosion proof and suitable for flammable liquid and vapor.

NOTE: Vapors released from the spill may create an explosive atmosphere.

Initial Containment
Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up
Soak up with sawdust, sand, oil dry or other absorbent material. Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)
Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

Handling (Physical Aspects)
Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, grind, or drill on or near full or empty container. Empty container retains residue (liquid and/or vapor) and may explode in heat of a fire.

Storage
Store in accordance with National Fire Protection Association recommendations. Store away from oxidizers, heat, sparks and flames.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
Ventilation: General mechanical ventilation normally adequate but use local exhaust where necessary to maintain exposures below acceptable

limits.

Personal Protective Equipment

Respiratory Protection: Select appropriate NIOSH-approved respiratory protection where necessary to maintain exposure below acceptable limits given in this section. Proper respirator selection should be determined by adequately trained personnel and based on the contaminant(s), the degree of potential exposure and published respirator protection factors.

Protective Gloves: Should be worn when any potential exists for skin contact. NBR or neoprene recommended.

Eye Protection: Chemical splash goggles or face shield for sprays or mists or if splashing is probable.

Other Protective Equipment: Sufficient protective clothing to minimize skin exposure. Launder contaminated clothing before reuse. Extremely contaminated leather shoes should be discarded.

Exposure Guidelines

Applicable Exposure Limits

Benzene

PEL (OSHA):	1 ppm, 8 Hr. TWA 5 ppm, STEL 0.5 ppm, Action Level
TLV (ACGIH):	0.5 ppm, 1.6 mg/m3, 8 Hr. TWA, Skin, A1 STEL 2.5 ppm, 8 mg/m3, A1
AEL * (DuPont):	1 ppm, 8 & 12 Hr. TWA 5 ppm, 15 minute TWA

Toluene

PEL (OSHA):	200 ppm, 8 Hr. TWA 300 ppm, Ceiling 500 ppm - 10 Min. Max.
TLV ACGIH):	50 ppm, 188 mg/m3, 8 Hr. TWA, Skin, A4
AEL * (DuPont):	50 ppm, 8 & 12 Hr. TWA

Ethyl Benzene

PEL (OSHA):	100 ppm, 435 mg/m3, 8 Hr. TWA
TLV (ACGIH):	100 ppm, 434 mg/m3, 8 Hr. TWA STEL 125 ppm, 543 mg/m3
AEL * (DuPont):	25 ppm, 8 & 12 Hr. TWA

p-Xylene

PEL (OSHA):	100 ppm, 435 mg/m3, 8 Hr. TWA STEL 150 ppm, 655 mg/m3
TLV (ACGIH):	100 ppm, 434 mg/m3, 8 Hr. TWA, A4 STEL 150 ppm, 651 mg/m3, A4
AEL * (DuPont):	100 ppm, 8 & 12 Hr. TWA 150 ppm, 15 minute TWA

m-Xylene

PEL (OSHA):	100 ppm, 435 mg/m3, 8 Hr. TWA STEL 150 ppm, 655 mg/m3
TLV (ACGIH):	100 ppm, 434 mg/m3, 8 Hr. TWA, A4 STEL 150 ppm, 651 mg/m3, A4

AEL * (DuPont): 100 ppm, 8 & 12 Hr. TWA
150 ppm, 15 minute TWA

o-Xylene
PEL (OSHA): 100 ppm, 435 mg/m3, 8 Hr. TWA
STEL 150 ppm, 655 mg/m3
TLV (ACGIH): 100 ppm, 434 mg/m3, 8 Hr. TWA, A4
STEL 150 ppm, 651 mg/m3, A4
AEL * (DuPont): 100 ppm, 8 & 12 Hr. TWA
150 ppm, 15 minute TWA

1,2,4-Trimethyl Benzene
PEL (OSHA): 25 ppm, 125 mg/m3, 8 Hr. TWA
TLV (ACGIH): 25 ppm, 123 mg/m3, 8 Hr. TWA
AEL * (DuPont): None Established

Tetraethyl Lead
PEL (OSHA): 0.075 mg/m3, as Pb, 8 Hr. TWA, Skin
TLV (ACGIH): 0.1 mg/m3, as Pb, 8 Hr. TWA, Skin, A4
AEL * (DuPont): None Established

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Boiling Point	90-338 F (32-170 C)
Vapor Pressure	180-240
Vapor Density	3-4 (Air = 1)
% Volatiles	(by volume) 100
Evaporation Rate	>1 (Butyl Acetate = 1)
Solubility in Water	Very slightly soluble
Odor	Gasoline
Form	Liquid
Color	Blue
Specific Gravity	0.7 (Water = 1)

STABILITY AND REACTIVITY

Chemical Stability
Stable.

Conditions to Avoid
Avoid heat, sparks, and flame.

Incompatibility With Other Materials
Incompatible with strong oxidizing agents. Avoid exposure to oxygen.

Decomposition
Carbon monoxide may be formed during combustion.

Polymerization
Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Animal studies have shown that prolonged or repeated inhalation exposures to high concentrations of some petroleum distillates have caused liver tumors in mice and kidney damage and tumors in male rats. However, kidney effects were not seen in similar studies involving female rats, guinea pigs, dogs, or monkeys. Present studies indicate the kidney effects will only occur in male rats. Also, human studies do not indicate this peculiar sensitivity for kidney damage and studies reported in 1992 showed that this particular type of rat kidney damage is not useful in predicting a human health hazard. The significance of liver tumors in mice exposed to high doses of chemicals is highly speculative and probably not a good indicator for predicting a potential human carcinogenic hazard.

Mouse skin painting studies have shown that petroleum middle distillates (boiling range 100-700 F; naphtha, jet fuel, diesel fuel, kerosene, etc.) can cause skin cancer when repeatedly applied and never washed from the animal's skin. The relative significance of this to human health is uncertain since the petroleum distillates were not washed from the skin and resulting skin effects (irritation, cell damage, etc.) may play a role in the tumorigenic response. A few studies have shown that washing the animal's skin with soap and water between treatments greatly reduces the carcinogenic effect of some petroleum oils. Other laboratory studies indicate that middle distillates caused the skin tumors by promoting, rather than initiating, the formation of tumors, so the effect is probably dose-related and low level exposure should not be carcinogenic.

One published study reports limited data suggesting long-term ingestion of 500 mg/kg of toluene caused increased malignant tumors in rats. Other more extensive inhalation studies demonstrated no carcinogenic effects in animals. Animal studies with toluene have failed to demonstrate birth defects in rats and mice. However, toluene has been shown to cause delayed growth and extra ribs in the offspring of rats and mice at inhaled doses (266-399 ppm) that were non-toxic to the mother. Toluene has not been conclusively shown to cause adverse reproductive effects in humans. Toluene overexposure may also cause cardiac irregularities and hearing loss (animal data).

Xylene

EYE:
Animal testing indicates this material is an eye irritant.

SKIN:
ALD, rabbit: 4,320 mg/kg (Moderately toxic).

Animal testing indicates this material is a moderate to severe skin irritant. This material has not been tested for skin sensitization. Single exposure to high doses caused: Narcosis.

INGESTION:
LD50, rat: 4,500 mg/kg (Slightly toxic).

Single exposure caused: Prostration. Incoordination.

Repeated exposure caused: Shallow respiration. Prostration. Liver and kidney effects. Reduced weight gain. Altered hematology and clinical

chemistry. Long-term exposure caused: Decreased body weight. Histopathological changes of the liver.

INHALATION:
4 hour, LC50, rat: 6,700 ppm (Very low toxicity).

Single exposure caused: Upper respiratory tract irritation. Behavioral effects. Incoordination. Prostration. Altered respiratory rate. Low blood pressure. Altered hematology.

Repeated exposure caused: Incoordination. Decreased response to sound. Histopathological changes of the liver, kidneys, adrenals, heart, spleen, lungs, bone marrow. Altered hematology. Reduced weight gain. Long-term exposure caused: Liver effects.

ADDITIONAL TOXICOLOGICAL EFFECTS:
One published study reports limited data suggesting high oral doses caused an increase in malignant tumors in rats. However, other more extensive animal studies have demonstrated no evidence of carcinogenicity.

Animal data show developmental effects only at or near levels producing other toxic effects in the adult animal. Reproductive data on adult animals show: No change in reproductive performance. Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. In animal testing, this material has not caused permanent genetic damage in reproductive cells of mammals (has not produced heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information
Xylene
AQUATIC TOXICITY:
Moderately toxic.
96 hour LC50 - Fathead minnows: 24-42 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal
Treatment, storage, transportation, and disposal must be in accordance

with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

By itself, the liquid is expected to be a RCRA ignitable hazardous waste.

TRANSPORTATION INFORMATION

Shipping Information

DOT	
Proper Shipping Name	Gasoline
Hazard Class	3
I.D. No. (UN/NA)	UN1203
Packing Group	II
DOT Label(s)	Flammable liquid
DOT Placard	Flammable

Marine Pollutant Gasoline, leaded

IMO
Same as DOT.

REGULATORY INFORMATION

U.S. Federal Regulations

OSHA HAZARD DETERMINATION
This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

CERCLA/SUPERFUND
Not applicable; this material is covered by the CERCLA petroleum exclusion.

SARA, TITLE III, 302/304
It is possible material may contain extremely hazardous substances at concentrations below 1.0% so that a large-enough spill could warrant an Emergency Release Report.

Hazardous Substance Tetraethyl lead (RQ 10 lbs)
Threshold Planning Quantity 10 lbs
Concentration <0.1%

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : Yes
Fire : Yes
Reactivity : No
Pressure : No

SARA, TITLE III, 313
This material contains the following chemical(s) at a level of 1.0% or greater (0.1% for carcinogens) on the list of Toxic Chemicals and is subject to toxic chemical release reporting requirements:

Toxic Chemical See component section.

TSCA:
Material and/or components are listed in the TSCA Inventory of Chemical Substances (40 CFR 710).

RCRA:
This material, when discarded or disposed of, is not specifically listed as a hazardous waste in Federal regulations; however, it meets criteria for being ignitable according to U.S. EPA definitions (40 CFR 261). This material could also become a hazardous waste if it is mixed with or comes in contact with a listed hazardous waste. If it is a hazardous waste, regulations at 40 CFR 262-266 and 268 may apply.

CLEAN WATER ACT
The material contains the following ingredient(s) which is considered hazardous if spilled into navigable waters and therefore reportable to the National Response Center (1-800-424-8802).

NPCA - HMIS Rating

Health	2 (Chronic Health Effects)
Flammability	3
Reactivity	0

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information
Product Use: Aviation Fuel

Responsibility for MSDS	: MSDS Coordinator
Address	: Conoco Inc.
>	: PO Box 2197
>	: Houston, TX 77252
Telephone	: 1-281-293-5550

# Indicates updated section.

End of MSDS

GASP0145

ISN: 1712194

* *
* M S D S *
* Canadian Centre for Occupational Health and Safety *
* * * * * * * * * * * * * Issue : 2000-1 (February, 2000) *

*** IDENTIFICATION ***

MSDS RECORD NUMBER : 1434111
PRODUCT NAME(S) : Battery Fluid Acid
Sulphuric Acid
BATTERY ACID
PRODUCT IDENTIFICATION : CAS# 7664-93-9
DATE OF MSDS : 1996-07
CURRENCY NOTE : MSDS Confirmed Current: 1998-02-10

*** MANUFACTURER INFORMATION ***

MANUFACTURER : Border Chemical Company Limited
ADDRESS : Plant Address:
595 Gunn Road
Winnipeg Manitoba
Canada
Telephone: 204-222-3276
Mailing Address:
104 Regent Avenue Box 62037
Winnipeg Manitoba
Canada R2C 5G2
EMERGENCY TELEPHONE NO. : 204-222-3276 (24 HOURS)

***

Message from Border Chemical Company Limited: While Border Chemical Company Limited believes that the information contained herein is reliable, this information is not to be taken as a warranty of representation for which Border Chemical Company Limited assumes legal responsibility nor as permission or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification. Since conditions of use are beyond our control, user assumes all responsibility and risk.

*** MATERIAL SAFETY DATA ***

BATTERY ACID

Material
Safety
Data Sheet July, 1996

SECTION 1 PRODUCT INFORMATION

TRADE NAME: Battery Fluid Acid
CHEMICAL NAME, SYNONYMS: Sulphuric Acid
SHIPPING NAME: Sulphuric Acid CAS # 7664-93-9
HAZARD CLASS: Corrosive Class 8(9.2) PIN 2796 PACKAGE GROUP II

PRODUCT IDENTIFICATION: UN2796
CHEMICAL FAMILY: Inorganic Acid
FORMULA: H2SO4 10 H2O

SECTION II HAZARDOUS INGREDIENTS

COMPOSITION	%	TLV (PPM)
Sulphuric Acid: H2SO4	35	

SPECIES	LD50 mg/kg ORAL	LD50 mg/kg DERMAL	LC50 mg/kg CONCENTRATION	LC50 mg/kg HOURS
RAT	2140			

Remaining: Water; H2O 65

SECTION III PHYSICAL DATA 30.38 DEG Be H2SO4

pH	<1
BOILING POINT DEG C	110
VAPOUR PRESSURE mm Hg at 20 deg C	N/A
VAPOUR DENSITY (AIR=1)	Low
SOLUBILITY IN WATER	Totally
SPECIFIC GRAVITY (H2O=1) AT 15.6 c	1.265
PERCENT VOLATILE BY VOLUME	N/A
EVAPORATION RATE (nBuAc=1)	N/A
FREEZING POINT DEG C	.70
APPEARANCE AND ODOUR	Colorless liquid with no detectable odour.

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT DEG C (TAG CLOSED CUP)	Lel	Uel
Not Flammable, may ignite combustible materials FLAMMABLE LIMITS % VOL IN AIR	N/A	N/A

EXTINGUISHING MEDIA Dry chemical or CO2 base fire extinguishers to fight adjacent fires **

SPECIAL FIRE FIGHTING PROCEDURES
Wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Sulphur dioxide (SO2), sulphur trioxide (SO3), sulphuric acid fumes.
Evolution of explosive hydrogen gas on contact with most metals.

** In fires toxic Sox fumes may be released.

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 1.0 ppm or 0.25 ppm expressed as mist or spray

EFFECTS OF OVEREXPOSURE
Contact with liquid, mist or vapour can cause immediate irritation or corrosive burns to all human tissue. Severity of the burn is generally determined by the concentration of the solution and duration of exposure. Contact with eyes may result in permanent visual loss unless removed quickly by thorough irrigation with water. Inhalation of concentrated vapor or mist will damage upper respiratory tract and lung tissues. Swallowing may be fatal. Repeated exposure may cause chronic bronchitis or inflammation.

Repeated skin contact with dilute solutions may cause dermatitis.

EMERGENCY AND FIRST AID PROCEDURES

Eyes: Flush immediately with water for at least 15 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eyelid tissue. Get immediate medical attention.

Skin: Flush immediately with water for at least 15 minutes while removing contaminated clothing. Get immediate medical attention. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion: Drink copious amounts of water or milk. Do not induce vomiting. Get immediate medical attention.

Inhalation: Remove to fresh air. If not breathing, perform artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; use the Holger Nielsen method (back pressure-armlift) or proper respiratory medical device. Get medical attention.

NOTES TO PHYSICIAN

The application of ice to skin burns will reduce scarring.

SECTION VI REACTIVITY DATA

STABILITY

STABLE	UNSTABLE
[X]	[ ]

CONDITIONS TO AVOID

Concentrated acid is a strong oxidizing agent. May cause ignition of combustible material on contact with generation of Sulphur Dioxide fumes. Avoid open flames or sparks.

INCOMPATIBILITY (MATERIALS TO AVOID)

Material is stable when properly handled. Highly reactive with materials such as metals, metal oxides, hydroxides, nitrates, amines, carbonates and other alkaline materials. Reactions can generate a great deal of heat as does the dilution of acid with water. Never add water to acid. Acid should always be added slowly to the water.

HAZARDOUS DECOMPOSITION PRODUCTS

If heated above 340 deg C, sulphuric acid will decompose to sulphur trioxide and water

HAZARDOUS POLYMERIZATION

MAY OCCUR	WILL NOT OCCUR
[ ]	[X]

CONDITIONS(S) TO AVOID

None

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Utilize full protective clothing, including boots and protective equipment. Contain spill in order to prevent contamination of sewage system or waterway. Pump into marked containers for reclamation or disposal. If possible,

neutralize on a dry basis with suitable alkali such as lime, soda ash or sodium bicarbonate; then flush with water in accordance with applicable regulations.

WASTE DISPOSAL METHOD
Dispose of spilled, neutralized, or waste product, contaminated soil and other contaminated materials in licensed landfill or treatment facility in accordance with all local, provincial and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE)
Cartridge type gas mask or self-contained breathing apparatus approved by NIOSH/MSHA.

VENTILATION
LOCAL EXHAUST Required
MECHANICAL (General)
Not compulsory

PROTECTIVE GLOVES	PVC or Neoprene
EYE PROTECTION	Goggles and face shield
OTHER	Safety showers and eye wash fountains should be installed in storage and handling areas.

SECTION IX SPECIAL INSTRUCTIONS

PRECAUTIONARY LABELLING
Labelling must comply with Transportation of Dangerous Goods Regulations. Shipping name, UN number and corrosive symbol must be on every package. Tank trucks should have corrosive placards with UN number.

PRECAUTIONS TO BE TAKEN IN HANDLING, STORAGE AND USE
- Protect container from physical damage.
- Wear protective clothing including boots, gloves, goggles and face shield.
- When diluting, slowly add acid to water while stirring to avoid spattering or boiling.
- Keep container closed and protect from contact with water to avoid possible violent reaction.
- Water cannot be added safely to concentrated acid.
- Do not strike containers at fittings with tools or hard objects.
- Wash thoroughly after handling.
- Store away from sources of ignition.
- Emptied container retains vapour and product residue.

Preparation Information

Prepared by:	BORDER CHEMICAL COMPANY LIMITED, Dennis Smerchanski.		
Re-issued:	July 1, 1996	Reviewed:	July, 1993
Telephone Number:	1(204)222-3276	Date:	July, 1996

Additional Information

"LD50" means the single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.
"LC50" means the concentration of a substance in the air that, when

administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50 per cent of a defined animal population.

CAS Registry Number means the identification number assigned to a chemical substance by the Chemical Abstracts Service Division of the American Chemical Society.

NA Number means, in respect of a product, material or substance, the product identification number set out in column II in the 9000 series or set out in column II with special provision number 40, 49 or 55 in column IV of List II to the Transportation of Dangerous Goods Requisitions.

UN Number means the identification Number assigned to a product, material or substance that is listed in Chapter 2 of the Recommendations on the Transport of Dangerous Goods, 4th revised edition, dated 1985, published by the United Nations.

ACGIH means the American Conference of Governmental Industrial Hygienists.

IARC means the International Agency for Research on Cancer.

NIOSH means the U.S. National Institute for Occupational Safety and Health.

NTP means National Toxicology Program.

OSHA CFR means the U.S. Occupational Safety and Health Administration, Federal Register, Part 1910.1200 on Hazard Communication.

TLV-TWA: Threshold Limit Value - Time Weighted Average.

TLV-STEL: Threshold Limit Value - Short Term Exposure Limit.

TLV-C: Threshold Limit Value - Ceiling.

with eyes, skin, and clothing. Overheating in storage accelerates corrosion. When diluting, use agitation and add caustic to water at a controlled rate.

STORAGE REQUIREMENTS

Store container away from materials that may react violently or are incompatible.

SPECIAL SHIPPING INFORMATION

Prevent from freezing.

SECTION 8 - FIRST AID MEASURES

SKIN

Immediately and thoroughly wash affected area with water for at least 20 minutes. Remove contaminated clothing and launder before reuse. Get medical attention for severe exposures.

EYE

Immediately and thoroughly flush eyes, holding eyelids open, with lukewarm, gently flowing water for at least 20 minutes, then seek immediate medical attention.

INHALATION

Remove victim from hazard. Apply artificial respiration if indicated. Seek medical attention.

INGESTION

Do not induce vomiting. Dilute by drinking large quantities of milk or water. Call a physician and/or transport victim to an emergency medical facility. Never induce vomiting or give fluids to an unconscious victim.

GENERAL ADVICE

SECTION 9 - PREPARATION OF M.S.D.S.

PREPARED BY
Regulatory Affairs Department

PHONE NUMBER
Corporate Office: (604) 264-9799
Technical Centre: (905) 331-0950

DATE
October 15, 1997

ADDITIONAL INFORMATION AND COMMENTS

```
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
*                          M S D S                          *
*                                                           *
*  Canadian Centre for Occupational Health and Safety       *
* * * * * * * * * * * * * Issue : 2000-1 (February, 2000)   *
```

*** IDENTIFICATION ***

MSDS RECORD NUMBER : 218190
PRODUCT NAME(S) : Acetylene
PRODUCT IDENTIFICATION : COL 1352
DATE OF MSDS : 1989-03

*** MANUFACTURER INFORMATION ***

MANUFACTURER : Canadian Oxygen Limited
Canox
ADDRESS : The Corporate Centre
89 Queensway West
Mississauga Ontario
Canada L5B 2V2
Telephone: 416-251-5241 (Canox 24 hr. telephone no)
EMERGENCY TELEPHONE NO. : 613-996-6666 (Canutec)
2-0101 (Emergency Response No.)

*** MATERIAL SAFETY DATA ***

MATERIAL SAFETY DATA SHEET

PRODUCT INFORMATION

PRODUCT NAME: Acetylene CHEMICAL FAMILY: Alkyne

SYNONYMS: Ethyne or Acetylene, dissolved TDG CLASSIFICATION: 2.1 UN 1001

HAZARDOUS INGREDIENTS

COMPONENT	FORMULA	CONCENTRATION	CAS #
Acetylene	C2H2	100%	74-86-2

PREPARATION INFORMATION

PREPARED BY: Gas Products Dept. DATE PREPARED: January, 1989
PHONE NO.: (416) 273-7700

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT:

Acetylene is defined as a simple asphyxiant. Oxygen levels should be maintained at greater than 18 molar percent at normal atmospheric pressure.

Acetylene is shipped dissolved in acetone, CAS #67-64-1, which comprises approximately 40% of the cylinder weight. Acetone may discharge and burn along

with acetylene if the cylinder is stored on its side.
Exposure levels for acetone are: OSHA-PEL: 1,000 PPM. ACGIH-TWA: 750 PPM, STEL: 1,00 PPM (ACGIH, 1988-89)

SYMPTOMS OF EXPOSURE:

Inhalation: Low concentrations (10-20 molar % in air) cause symptoms similar to that of being intoxicated. Higher concentrations so as to exclude an adequate supply of oxygen to the lungs can cause unconsciousness.

TOXICOLOGICAL PROPERTIES:

As a narcotic gas or intoxicant causes hypercapnia (an excessive amount of carbon dioxide in the blood). Repeated exposures to tolerable levels has not shown deleterious effects. The major property is the exclusion of an adequate supply of oxygen to the lungs.

FIRST AID

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO ACETYLENE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND BE COGNIZANT OF EXTREME FIRE AND EXPLOSION HAZARD.

Inhalation: Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given mouth-to-mouth resuscitation and supplemental oxygen. Further treatment should be symptomatic and supportive.

PHYSICAL DATA

Sublimation Point = -84.0 deg C (-119.2 deg F)
Liquid Density @ Boiling Point: = 622 kg/m3 (38.8 lb/ft3)
Vapor Pressure @ 21.1 deg C (70 deg F): 4450 kPa absolute (645 psia)
Specific Gravity @ 21.1 deg C, 1 bar (Air=1): = 0.906
Solubility in Water: Soluble
Freezing Point: -80.6 deg C (-113 deg F)
Appearance and Odour: Pure acetylene is a colourless gas with an ethereal odour. Commercial (carbide) acetylene has a distinctive garlic-like odour.

FIRE/EXPLOSION HAZARDS DATA

Flash Point (Method Used): Gas
Auto Ignition Temperature: 296 deg C (565 deg F)
Flammability Limits: LEL: 2.2%
UEL: 80-85%*
Extinguishing Media: Carbon dioxide; dry chemical

Electrical Classification: Class 1, Group A

Special Fire Fighting Procedures: If possible, stop flow of escaping gas. Use water spray to cool surrounding containers. Keep personnel away since heated or burning cylinders can rupture violently.

Unusual Fire and Explosion Hazards: GASEOUS ACETYLENE IS SPONTANEOUSLY COMBUSTIBLE IN AIR AT PRESSURES ABOVE 207 kPa absolute (30 PSIA). It requires a very low ignition energy so that fires which have been extinguished without

stopping the flow of gas can easily reignite with possible explosive force. Acetylene has a density very similar to that of air so when leaking it does not readily dissipate.

* Pure acetylene can ignite by decomposition above 207 kPa absolute (30 psia); therefore, the UEL is 100% if the ignition source is of sufficient intensity.

REACTIVITY DATA

Stability: Unstable

Incompatibility (Materials to Avoid): Oxygen and other oxidizers including all of the halogens and halogen compounds. Forms explosive acetylide compounds with copper, mercury, silver, brasses containing more than 66% copper and brazing materials containing silver or copper.

Hazardous Decomposition Products: Carbon monoxide and hydrogen

Hazardous Polymerization: Will not occur

Conditions to Avoid: Do not allow the free gas (outside of cylinder) to exceed 207 kPa absolute (30 psia). Cylinders should not be exposed to sudden shock or sources of heat.

Hazardous Mixtures of Other Liquids, Solids or Gases: Flammable over an extremely wide range in air. Explosive reactions may occur on ignition. Reacts explosively with halogens and halogenated compounds.

PREVENTIVE MEASURES

SPILL OR LEAK PROCEDURES:

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container or container valve, contact CANUTEC for emergency assistance or your closest CANOX location.

Waste Disposal Method:

Do not attempt to dispose of waste or unused quantities. Return in the shipping container properly labelled, with any valve outlet plugs or caps secured and valve protection cap in place to CANOX for proper disposal.

ENGINEERING CONTROLS:

Respiratory Protection: Positive pressure air line with mask or self-contained breathing apparatus should be available for emergency use.

Ventilation: Hood with forced ventilation.

Local Exhaust: To prevent accumulation above the LEL.

Mechanical (Gen.): In accordance with electrical codes.

PERSONAL PROTECTIVE EQUIPMENT:

Protective Gloves: PVC or rubber in laboratory; as required for cutting &

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: April 21, 1999
Supersedes: June 20, 1997
MSDS Number: 08522

Cette fiche signalétique est aussi disponible en français

1. PRODUCT INFORMATION

Product Identifier: UNLEADED GASOLINE
REGULAR UNLEADED
MIDGRADE UNLEADED
ESSO SUPER PREMIUM UNLEADED
PREMIUM UNLEADED
ESSO REGULAR UNLEADED
ESSO MIDGRADE UNLEADED
ESSO EXTRA MIDGRADE UNLEADED
ESSO PREMIUM UNLEADED
EXXON MIDGRADE UNLEADED
EXXON PREMIUM UNLEADED
INDOLENE GASOLINE
EXXON REGULAR UNLEADED
PREMIUM GASOLINE
ESSO EXTRA MIDGRADE GASOLINE
MIDGRADE GASOLINE
GASOLINE REGULAR UNLEADED
GASOLINE MIDGRADE UNLEADED MUL89 (DYED OR CLEAR)
GASOLINE REGULAR UNLEADED RUL87 (DYED OR CLEAR)
GASOLINE PREMIUM UNLEADED PUL91 (DYED OR CLEAR)
GASOLINE PREMIUM UNLEADED PUL92 (DYED OR CLEAR)
GASOLINE PREMIUM UNLEADED SUL94
SUPERSUPREME 94 PREMIUM UNLEADED GASOLINE-MTBE
GASOLINE MIDGRADE UNLEADED MUL89 <P91/R87>
GASOLINE MIDGRADE UNLEADED MUL89 DCA <P92/R87>

Application and Use:
Motor gasoline fuel, for use in internal combustion engines only

Product Description:

A mixture of aliphatic and aromatic hydrocarbons and additives.

REGULATORY CLASSIFICATION

WHMIS:

Class D, Division 2, Subdivision A: Very Toxic Material.
Class B, Division 2: Flammable Liquids.

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT

All components of this product are either on the Domestic Substances List (DSL), exempt, or have been notified under Section 26 of CEPA.

TDG INFORMATION (RAIL/ROAD):

Shipping Name: Gasoline
Class: 3
Packing Group: II
PIN Number: UN1203

Please be aware that other regulations may apply.

TELEPHONE NUMBERS

Emergency 24 hr. (519) 339-2145
Technical Info. (800) 268-3183

MANUFACTURER/SUPPLIER:

IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(416) 968-4441

2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a) (i) to (iv) or paragraph 14(a) of the Hazardous Products Act:

NAME	%	CAS #	
Gasoline	> 98 v/v	8006-61-9	LD50 > 18ml/kg,orl,rat LD50 > 5ml/kg,skn,rbt
Methyl T-Butyl Ether	0-11 v/v	1634-04-4	LD50:3.9g/Kg,ing,rat LD50: > 10g/Kg,skn,rbt LC50:142Mg/L,inh,rat

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: 0.80 cSt at 20 deg C
Vapour Density: 3.2
Boiling Point: 25 to 210 deg C
Evaporation rate: > 10 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: -60 deg C less than
Odour Threshold: not available
Vapour Pressure: 76 kPa to 103 kPa at 38 deg C
Density: 0.73 g/cc at 15 deg C
Appearance/odour: Naturally occurring water white or pale yellow; may be dyed a variety of colours for tax or other purposes; petroleum odour.

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.
Avoid breathing vapours or mists.

EYE CONTACT:

Slightly irritating, but will not injure eye tissue.

SKIN CONTACT:

Low toxicity.
Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

INGESTION:

Low toxicity.
Small amounts of this liquid drawn into the lungs from swallowing or vomiting may cause severe health effects (e.g. bronchopneumonia or pulmonary edema).

CHRONIC:

The International Agency for Research on Cancer (IARC) has evaluated gasoline and found it to be a possible human carcinogen.
Contains benzene. Human health studies (epidemiology) indicate that prolonged and/or repeated overexposures to benzene may cause damage to the blood producing system and serious blood disorders, including leukemia.
Animal tests suggest that prolonged and/or repeated overexposures to benzene may damage the embryo/fetus. The relationship of these animal studies to humans has not been fully established.
Contains n-hexane. Prolonged and/or repeated exposures may cause damage to the peripheral nervous system (e.g. fingers, feet, arms etc.).

ACUTE TOXICITY DATA:

Based on animal testing data from similar materials and products, the acute toxicity of this product is expected to be:
Oral : LD50 > 18 ml/kg (Rat)
Dermal : LD50 > 5 ml/kg (Rabbit)

OCCUPATIONAL EXPOSURE LIMIT:

Manufacturer recommends:
For Benzene (skin) 1 ppm TWA for 8 hour workday.
For gasoline, 300 mg/m3.
For Methyl-tert-Butyl Ether, a 15 minute short-term exposure limit (STEL) of 50 ppm.

ACGIH recommends:
For Gasoline, ACGIH recommends a TWA of 300 ppm (890 mg/m3) and categorizes it as an animal carcinogen.
For n-Hexane (skin), 50 ppm (176 mg/m3).
For Benzene, ACGIH recommends a TWA of 0.5 ppm (1.6 mg/m3), (skin), and categorizes it as a confirmed human carcinogen.
For Methyl-tert-Butyl Ether, ACGIH recommends a TLV of 40 ppm (144 mg/m3) an categorizes it as an animal carcinogen.

Local regulated limits may vary.

Please turn over

Imperial Oil (Esso) L'Impériale

TO/A	FAXBACK
DATE: 23 February 2000	PLEASE INDICATE CHANGES AND MAIL/FAX TO OUR ADDRESS BELOW NOUS AVISER DE TOUT CHANGEMENT PAR COURRIER OU PAR FAX (ADRESSE CI-DESSOUS)
ATTENTION:	ATTENTION:
COMPANY/COMPAGNIE:	COMPANY/COMPAGNIE:
ADDRESS/ADRESSE:	ADDRESS/ADRESSE:
CITY/VILLE:	CITY/VILLE:
FAX NO./N° DE FAX: (780) 430 - 1797	FAX NO./N° DE FAX:
PHONE NO./N° DE TÉLÉPHONE: (XXX) XXX -	PHONE NO./N° DE TÉLÉPHONE:
LANGUAGE PREFERENCE/LANGUE DE CORRESPONDANCE:	LANGUAGE PREFERENCE/LANGUE DE CORRESPONDANCE:
ENG/ANG: X FR/FR: BOTH/LES DEUX:	ENG/ANG: FR/FR: BOTH/LES DEUX:

FROM/DE

IOL FAXBACK SYSTEM
CUSTOMER SERVICE
90 WYNFORD DR.
NORTH YORK, ONTARIO
FAX NUMBER:416-441-7829
PHONE NUMBER:800-IOL-MSDS

MESSAGE

ONE OF OUR PRIORITIES IS TO KEEP OUR CUSTOMERS ABREAST OF HEALTH AND SAFETY INFORMATION REGARDING THE USE OF OUR PRODUCTS IN THE WORKPLACE.
PLEASE FIND ATTACHED, OUR MOST CURRENT MATERIAL SAFETY DATA SHEET (MSDS).

PLEASE REPLACE ANY PREVIOUS SHEETS WITH THE ATTACHED VERSIONS.
IT IS IMPERATIVE THAT THIS NEW INFORMATION BE COMMUNICATED, AS APPROPRIATE, TO YOUR EMPLOYEES AND/OR CUSTOMERS.
SHOULD YOU EXPERIENCE ANY DIFFICULTY WITH THIS FAX TRANSMISSION, OR HAVE RECEIVED IT BY ERROR, PLEASE NOTIFY THE SENDER BY CALLING THE ABOVE NUMBER.
WE ALSO WOULD ASK YOUR HELP IN KEEPING OUR RECORDS CURRENT.
IF THE ABOVE INFORMATION REQUIRES ANY REVISION, COMPLETE THE FAXBACK AREA ON THIS LETTER AND RETURN IT TO US AT THE ABOVE ADDRESS OR FAX NUMBER.

YOUR BUSINESS IS APPRECIATED AND WE WILL CONTINUE TO SUPPLY QUALITY PRODUCTS AND SERVICES, ALONG WITH INFORMATION TO ASSIST YOU IN YOUR EFFORTS TO MAINTAIN A HEALTHY AND SAFE WORKPLACE.
PRODUCTS WITH (OBSOLETE) AS SUFFIX ARE NO LONGER MANUFACTURED OR SOLD.*

MSDS INCLUDED/FS INCLUSE(S)

UNLEADED GASOLINE
LIGHT DISTILLATE
MIDDLE DISTILLATE

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

5. FIRST AID MEASURES

INHALATION:

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

EYE CONTACT:

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Flush with large amounts of water. Use soap if available.
Remove severely contaminated clothing (including shoes) and launder before reuse.
If irritation persists, seek medical attention.

INGESTION:

DO NOT induce vomiting since it is important that no amount of the material should enter the lungs (aspiration). Keep at rest. Get prompt medical attention.

6. PREVENTIVE AND CORRECTIVE MEASURES

PERSONAL PROTECTION:

The selection of personal protective equipment varies, depending upon conditions of use.
In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.
Where only incidental contact is likely, wear safety glasses with side shields. No other special precautions are necessary provided skin/eye contact is avoided.
Where concentrations in air may exceed the occupational exposure limits given in Section 4 and where engineering, work practices or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

ENGINEERING CONTROLS:

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.
Use explosion-proof ventilation equipment.

HANDLING, STORAGE AND SHIPPING:

Keep containers closed. Handle and open containers with care.
In keeping with good personal hygiene practices, wash hands thoroughly after handling the material.
Store and load at normal (up to 38 deg C) temperature and at atmospheric pressure.
Material will accumulate static charges which may cause a spark. Static charge build-up could become an ignition source. Use proper relaxation and grounding procedures.
For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere.
Empty containers may contain product residue. Do not pressurize cut, heat, or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.

LAND SPILL:

Eliminate source of ignition. Keep public away. Prevent additional discharge of material, if possible to do so without hazard.
Vapours or dust may be harmful or fatal. Warn occupants of downwind areas.
Prevent spills from entering sewers, watercourses or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
Recover by pumping (use an explosion proof motor or hand pump), or by using a suitable absorbent.
Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.
Take all additional action necessary to prevent and remedy the adverse effects of the spill.

WATER SPILL:

Eliminate all sources of ignition. Vapours or dust may be harmful or fatal. Warn occupants and shipping in downwind areas.
Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.
Take all additional action necessary to prevent and remedy the adverse effects of the spill.

7. FIRE AND EXPLOSION HAZARD

Flashpoint and method: -40 deg C COC D92 less than/moins de

Autoignition: NA Flammable Limits: LEL: 1.4% UEL: 7.6%

GENERAL HAZARDS:

Extremely flammable; material will readily ignite at normal temperatures.
Flammable Liquid; may release vapours that form flammable mixtures at or above the flash point.
Toxic gases will form upon combustion.
Static Discharge; material may accumulate static charges which may cause a fire.

FIRE FIGHTING:

Use water spray to cool fire exposed surfaces and to protect personnel.
Shut off fuel to fire if possible to do so without hazard. If a leak or spill has not ignited use water spray to disperse the vapours.
Either allow fire to burn out under controlled conditions or extinguish with foam or dry chemical. Try to cover liquid spills with foam.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boilover.
A self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA may not be required.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, carbon monoxide, carbon dioxide under thermal decomposition.

8. REACTIVITY DATA

STABILITY:

This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents

HAZARDOUS DECOMPOSITION:

none

9. NOTES

All components of this product are listed on the U.S. TSCA inventory.

This MSDS has been revised in Section 4.
Occupational Exposure Limit change.

10. PREPARATION

Date Prepared : April 21, 1999
Prepared by: Lubricants & Specialties
IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(800) 268-3183

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: May 12, 1998
Supersedes: May 18, 1995
MSDS Number: 08529

Cette fiche signalétique est aussi disponible en français

1. PRODUCT INFORMATION

Product Identifier: LIGHT DISTILLATE
ESSO STOVE OIL (DYED OR CLEAR)
DIESEL ARCTIC (DYED OR CLEAR)
ESSO DIESEL DEW (DYED OR CLEAR)
ESSO DIESEL ARCTIC (DYED OR CLEAR)
ESSO STOVE QUALITY COMMERCIAL FUEL
ESSO STOVE QUALITY FURNACE FUEL
ESSO STOVE QUALITY HEATING OIL (DYED OR CLEAR)
STOVE QUALITY FURNACE FUEL
DIESEL 60 (DYED OR CLEAR)
DIESEL DEW (DYED OR CLEAR)
ESSO DIESEL 60 (DYED OR CLEAR)
ESSO DIESEL LIGHT (DYED OR CLEAR)
STOVE OIL (DYED OR CLEAR)
STOVE QUALITY HEATING OIL (DYED OR CLEAR)
ESSO DIESEL FUEL OIL 50 (DYED OR CLEAR)
DIESEL LOW SULFUR LIGHT (DYED OR CLEAR)
LIGHT DISTILLATE (LOW SULFUR)
STOVE QUALITY COMMERCIAL FUEL
DIESEL FUEL OIL 50 (DYED OR CLEAR)
DIESEL LIGHT (DYED OR CLEAR)
DIESEL LOW SULFUR LIGHT DYED EP
FURNACE LIGHT (DYED OR CLEAR)

Application and Use:
Multi-purpose fuel

Product Description:

A complex mixture of aliphatic, olefinic, naphthenic and aromatic hydrocarbons, and additives.

REGULATORY CLASSIFICATION

WHMIS:

Class B, Division 3: Combustible Liquids.
Class D, Division 2, Subdivision B: Toxic Material

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT

All components of this product are either on the Domestic Substances List (DSL) or are exempt.

TDG INFORMATION (RAIL/ROAD):

Shipping Name: FUEL OIL
Class: 3
Packing Group: III
PIN Number: UN1202

Please be aware that other regulations may apply.

TELEPHONE NUMBERS

Emergency 24 hr. (519) 339-2145
Technical Info. (800) 268-3183

MANUFACTURER/SUPPLIER:

IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(416) 968-4111

2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a)(i) to (iv) or paragraph 14(a) of the Hazardous Products Act:

NAME	%	CAS #	
Kerosene, straight run	0-100 v/v	8008-20-6	LD50: > 5g/kg,oral,rat
Light Atmospheric Gas Oil	0-100 v/v	64741-44-2	
Light Hydrocracked Distillate	0-100 v/v	64741-77-1	

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: 1.80 cSt at 40 deg C
Vapour Density: 4
Boiling Point: 180 to 320 deg C
Evaporation rate: < 1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: -39 deg C ASTM D97
Odour Threshold: not available
Vapour Pressure: 4 kPa at 38 deg C
Density: 0.85 g/cc at 15 deg C
Appearance/odour: White or pale yellow liquid, petroleum odour

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

Negligible hazard at normal temperatures (up to 38 deg C).
High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.
Avoid breathing vapours or mists.

EYE CONTACT:

Slightly irritating, but will not injure eye tissue.

SKIN CONTACT:

Low toxicity.
Irritating.

INGESTION:

Low toxicity.
Small amounts of this liquid drawn into the lungs from swallowing or vomiting may cause severe health effects (e.g. bronchopneumonia or pulmonary edema).

CHRONIC:

Lifetime skin painting tests indicate that materials of similar composition have produced skin cancer in experimental animals. The relationship of these results to humans has not been fully established.

ACUTE TOXICITY DATA:

Based on animal testing data from similar materials and products, the acute toxicity of this product is expected to be:
Oral : LD50 > 5000 mg/kg (Rat)
Dermal : LD50 > 2000 mg/kg (Rabbit)
Inhalation : LC50 > 2500 mg/m3 (Rat)

OCCUPATIONAL EXPOSURE LIMIT:

Manufacturer recommends:
100 ppm based on composition.

Local regulated limits may vary.

5. FIRST AID MEASURES

INHALATION:

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

EYE CONTACT:

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

SKIN CONTACT:

Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention.

INGESTION:

DO NOT induce vomiting since it is important that no amount of the material should enter the lungs (aspiration). Keep at rest. Get prompt medical attention.

Please turn over

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

6. PREVENTIVE AND CORRECTIVE MEASURES

PERSONAL PROTECTION:

The selection of personal protective equipment varies, depending upon conditions of use.
In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.
Where only incidental contact is likely, wear safety goggles, long sleeves, and chemical-resistant gloves.
Where concentrations in air may exceed the occupational exposure limits given in Section 4 and where engineering, work practices or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

ENGINEERING CONTROLS:

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

HANDLING, STORAGE AND SHIPPING:

Keep containers closed. Handle and open containers with care.
Store in a cool, well ventilated place away from incompatible materials.
In keeping with good personal hygiene practices, wash hands thoroughly after handling the material.
Do not handle or store near an open flame, sources of heat, or sources of ignition.
Material will accumulate static charges which may cause a spark. Static charge build-up could become an ignition source. Use proper relaxation and grounding procedures.
Empty containers may contain product residue. Do not pressurize cut, heat, or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.

LAND SPILL:

Eliminate source of ignition. Keep public away. Prevent additional discharge of material, if possible to do so without hazard.
Prevent spills from entering sewers, watercourses or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
Recover by pumping (use an explosion proof motor or hand pump), or by using a suitable absorbent.
Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.
Take all additional action necessary to prevent and remedy the adverse effects of the spill.

WATER SPILL:

Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in unconfined waters.

Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately.
Take all additional action necessary to prevent and remedy the adverse effects of the spill.

7. FIRE AND EXPLOSION HAZARD

Flashpoint and method: 40 deg C PMCT ASTM D93

Autoignition: NA Flammable Limits: LEL: 0.7% UEL: 6.5%

GENERAL HAZARDS:

Combustible Liquid; may form combustible mixtures at or above the flash point.
Toxic gases will form upon combustion.
Static Discharge; material may accumulate static charges which may cause a fire.

FIRE FIGHTING:

Use water spray to cool fire exposed surfaces and to protect personnel.
Shut off fuel to fire.
Use foam, dry chemical or water spray to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boilover.
A self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA may not be required.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, carbon monoxide, carbon dioxide, oxides of sulphur.
In addition, small amounts of nitrogen oxides will be formed.

8. REACTIVITY DATA

STABILITY:

This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Strong oxidizing agents. Use product with caution around heat, sparks, pilo lights, static electricity and open flames.

HAZARDOUS DECOMPOSITION:

none

9. NOTES

All components of this product are listed on the U.S. TSCA inventory.

Three year WHMIS review.
This MSDS has been revised in Sections 1, 3, 7 and 8.

10. PREPARATION

Date Prepared : May 12, 1998
Prepared by: Lubricants & Specialties
IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(800) 268-3182

Esso Imperial Oil MATERIAL SAFETY DATA SHEET

Date Prepared: April 08, 1997
Supersedes: April 13, 1994
MSDS Number: 00626

Cette fiche signalétique est aussi disponible en français

1. PRODUCT INFORMATION

Product Identifier: MIDDLE DISTILLATE
ESSO MARINE GAS OIL (DYED OR CLEAR)
ESSO RAILROAD DIESEL (DYED OR CLEAR)
HEATING OIL (DYED OR CLEAR)
DIESEL (DYED OR CLEAR)
DIESEL QUALITY FURNACE FUEL (DYED OR CLEAR)
DIESEL QUALITY HEATING OIL (DYED OR CLEAR)
ESSO DIESEL (DYED OR CLEAR)
ESSO DIESEL QUALITY COMMERCIAL FUEL (DYED OR CLEAR
ESSO DIESEL QUALITY FURNACE FUEL
ESSO DIESEL QUALITY HEATING OIL
ESSO FURNACE FUEL (DYED OR CLEAR)
ESSO HEATING OIL (DYED OR CLEAR)
ESSO MARINE DIESEL FUEL (DYED OR CLEAR)
ESSO RAILROAD DIESEL FUEL #3 (DYED OR CLEAR)
ESSO TOBACCO CURING OIL
FUEL OIL 75
FUEL OIL 76
DIESEL MARINE (DYED OR CLEAR)
DIESEL MARINE GAS OIL (DYED OR CLEAR)
FURNACE (DYED OR CLEAR)
DIESEL MARINE - POUR DEPRESSED (DYED OR CLEAR)
NO.2 FUEL OIL
NAVAL FUEL OIL 3-GP-11M (DYED)
ESSO DIESEL FUEL LS
DIESEL LOW SULFUR (DYED OR CLEAR)
NO.2 FUEL OIL FOR EXPORT
DIESEL FOR EXPORT (DYED OR CLEAR)
FURNACE TOBACCO CURING OIL
DIESEL NAVAL 3GP-11 (DYED OR CLEAR)
DIESEL NAVAL 3GP-15 (DYED OR CLEAR)
DIESEL LOW SULFUR RAIL (DYED OR CLEAR)
DIESEL LOW SULFUR DYED EP
DIESEL RAIL (DYED OR CLEAR)
DIESEL RAIL #3 (DYED OR CLEAR)
DIESEL RAIL #3 <HD> (DYED OR CLEAR)
DIESEL LOW SULFUR <032> (DYED OR CLEAR)
FURNACE URBAN (DYED OR CLEAR)
DIESEL (032) (DYED OR CLEAR)
DIESEL LOW SULFUR (EXP DYED)
FURNACE FUEL <032> DYED
DIESEL LOW SULFUR <EXPORT>

Application and Use:
Multi-purpose fuel

Product Description:

A complex mixture of aliphatic, olefinic, naphthenic and aromatic hydrocarbons.

REGULATORY CLASSIFICATION

WHMIS:

Class D, Division 2, Subdivision B: Toxic Material
Class B, Division 3: Combustible Liquids.

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT

All components of this product are either on the Domestic Substances List (DSL) or are exempt.

TDG INFORMATION (RAIL/ROAD):

Shipping Name: FUEL OIL
Class: 3
Packing Group: III
PIN Number: UN1202

Please be aware that other regulations may apply.

TELEPHONE NUMBERS

Emergency 24 hr. (519) 339-2145
Technical Info. (800) 268-3183

MANUFACTURER/SUPPLIER:

IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(416) 968-4111

2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a) (i) to (iv) or paragraph 14(a) of the Hazardous Products Act:

NAME	%	CAS #
Fuel Oil No.2	> 99.9 w/v	68476-30-2

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: 1.30 cSt at 40 deg C
to 11.00 cSt at 40 deg C
Vapour Density: 4
Boiling Point: 150 to 370 deg C
Evaporation rate: < 1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: not available
Odour Threshold: not available
Vapour Pressure: 4 kPa at 38 deg C
Density: 0.85 g/cc at 15 deg C
Appearance/odour: White or pale yellow liquid, petroleum odour

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

Negligible hazard at normal temperatures (up to 38 deg C).
High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.
Avoid breathing vapours or mists.

EYE CONTACT:

Slightly irritating, but will not injure eye tissue.

SKIN CONTACT:

Low toxicity.
Irritating.

INGESTION:

Low toxicity.
Small amounts of this liquid drawn into the lungs from swallowing or vomiting may cause severe health effects (e.g. bronchopneumonia or pulmonary edema).

CHRONIC:

Lifetime skin painting tests indicate that materials of similar composition have produced skin cancer in experimental animals. The relationship of these results to humans has not been fully established.

ACUTE TOXICITY DATA:

Based on animal testing data from similar materials and products, the acute toxicity of this product is expected to be:
Oral : LD50 > 5000 mg/kg (Rat)
Dermal : LD50 > 2000 mg/kg (Rabbit)
Inhalation : LC50 > 2500 mg/m3 (Rat)

OCCUPATIONAL EXPOSURE LIMIT:

Manufacturer recommends:
100 ppm based on composition.

Local regulated limits may vary.

5. FIRST AID MEASURES

INHALATION:

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call (or prompt) medical attention.

EYE CONTACT:

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

Please turn over