PETRO-CANADA

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing
	B-3, D-2B	

Section 1. Chemical Product and Company Identification

Product Name	**DIESEL FUEL**
Supplier	PETRO-CANADA P.O. Box 2844, Petro-Canada Centre Calgary, Alberta T2P 3E3
Synonym	Diesel 50, Diesel 50 LS, #1 Diesel , #1 Diesel LS, Diesel LC, Seasonal Diesel, Seasonal Diesel LS, Diesel AA, Domestic Marine Diesel, International marine Diesel, Seasonal Diesel Locomotive, Dosmestic Marine diesel LS, disesel -20°C (LS), Mining Diesel Special, Mining Diesel Special LS.
Chemical Name	Not applicable.
Chemical Family	Petroleum hydrocarbons.
Chemical Formula	Not applicable.
Manufacturer	PETRO-CANADA P.O. Box 2844 Petro-Canada Centre Calgary, Alberta T2P 3E3

Code	File # W105
DSL	On the DSL.
Print Date:	**01/16/96.**

In case of Emergency

Petro-Canada Emergency Number: (403) 296-3000
Canutec Transportation Emergency: (613) 996-6666
Poison Control Centre Numbers: Consult local telephone directory for emergency number(s).

Material Uses Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type.

Section 2. Composition/Information on Ingredients

		Exposure Limits (ACGIH)			
Name	**CAS #**	**TLV-TWA(8 h)**	**STEL**	**CEILING**	**% (V/V)**
Mixture of petroleum distillates. Aromatic content is 50% maximum (benzene: nil).	68476-30-5	100 ppm (525 mg/m³)	Not available	Not available	100

Section 3. Hazards Identification.

Potential Acute Health Effects Inhalation of vapours or mist in high concentration may cause headaches, nausea, dizziness, drowsiness, unconsciousness and passing out. May irritate skin, eyes and respiratory tract. For more information, refer to Section 11.

Potential Chronic Health Effects Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Prolonged or repeated contact with skin may cause irritation and possibly dermatitis.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. DO NOT use an eye ointment. Seek medical attention if irritation persists.

Skin Contact Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Get medical attention if redness or irritation occurs.

Inhalation Evacuate the victim to a safe area as soon as possible. Allow the victim to rest in a well ventilated area. If the victim is not breathing, perform mouth-to-mouth resuscitation. If resuscitation is required, physician assessment mandatory.

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Hazardous Inhalation	No additional remark.
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Physician assessment mandatory.
Hazardous Ingestion	Overexposure due to ingestion is unlikely for adults since taste and smell limit the amount swallowed.

Section 5. Fire-fighting Measures

The Product is:	Class II - combustible liquid (NFPA).
Auto-Ignition Temperature	225°C (437°F)
Flash Points	CLOSED CUP (tag): 52°C (126°F) for Mining Diesel Special and Mining Diesel special-LS. 40°C (104°F) for others.
Flammable Limits	LOWER: 0.7%, UPPER: 6%
Products of Combustion	Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), sulphur compounds (H2S); smoke and irritating fumes as products of incomplete combustion.
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames, sparks, or heat.
Explosion Hazards in Presence of Various Substances	Do not cut, weld, heat, or drill empty containers.
Fire Fighting Media and Instructions	DO NOT flush spilled material into sewers, streams, or other bodies of water. Respiratory, eye and body protection are required for fire fighting personnel. Self-contained breathing apparatus (SCBA) is required if approaching the fire from downwind, or to enter enclosed areas or buildings. Keep upwind. Isolate hazard area. SMALL FIRE: Use DRY chemicals, foam, CO2, water spray or fog. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Use water spray to cool fire exposed surfaces and to protect personnel. Shut off fuel to fire and disconnect all ignition sources if it is possible to do so without risk. Stay away from ends of tanks. Cool containers with water from maximum distance until well after fire is out. Avoid spraying water directly into storage containers due to danger of boilover. Try to cover spilled liquid with foam. If this is impossible, withdraw from area and let fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tank due to fire.
Special Remarks on Fire Hazards	No additional remark
Special Remarks on Explosion Hazards	No additional remark.

Section 6. Accidental Release Measures

Small Spill	Avoid contact. ELIMINATE ALL IGINITION SOURCES; no flares, smoking or flames in hazard area. Stop leak if without risk. Contain spill. Absorb with inert absorbent such as dry clay, diatomaceous earth, or commericial sorbents. Place used absorbent in closed metal containers for later disposal. DO NOT FLUSH TO SEWERS, STREAMS, OR OTHER BODIES OF WATER. Check with applicable jurisdictions for specific disposal requirements and cleanup of contaminated materials and empty containers.
Large Spill	Land spill: Dike with dry clay or diatomaceous earth to contain spill. DO NOT use combustible materials such as sawdust. Recover spill with electrically grounded explosion-proof pumps, hand pumps or vacuum into drums for re-use or disposal. Water spill: If floating, skim and remove. Check with applicable jurisdictions for specific disposal requirements of material and empty containers.

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Section 7. Handling and Storage

Handling	Keep away from heat, spark, open flames and other sources of ignition. Use explosion-proof ventilation to prevent vapour accumulation. Empty container may contain flammable/explosive residues or vapours, DO NOT reuse empty containers without commercial cleaning or reconditioning. Ground/bond line and equipment during pumping or transfer to avoid accumulation of static charge. Avoid contact with skin and eyes. DO NOT USE AS CLEANING FLUID OR SIPHON BY MOUTH. Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.
Storage	Store in tightly closed containers in cool, dry, isolated and well-ventilated area. Ground all equipments containing material.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	For normal outdoor application, special ventilation is not necessary. For indoor or confined spaces, provide explosion-proof local exhaust ventilation, or other engineer controls, to keep airborne concentration below the allowable threshold limit value. Make-up air should always by supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
Personal Protection	Chemical splash goggles in case of splashing. Wear long sleeved clothing to minimize skin contact. Be sure to use a MSHA/NIOSH approved respirator or equivalent when ventilation is inadequate. Full-faced self-contained breathing apparatus or air supplied (when concentrations exceed H2S 10ppm or for SO2 2 ppm). For casual contact, PVC gloves are suitable. For direct contact for more than 2 hours, NEOPRENE or NITRILE gloves are recommended.
Personal Protection in Case of a Large Spill	No additional remarks
Exposure Limits	Petro-Canada recommends an allowable exposure of 100 ppm (525 mg/m³) when handling Diesel fuel. Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Bright oily liquid.
Dropping Point	Not applicable.
Penetration (@ 25°C)	Not applicable.

Odor	Mild petroleum oil like.
Taste	Not applicable.
Color	Clear to yellow. Low sulphur diesel fuels are colourless to light yellow / brown, and are not dyed. Regular sulphur diesel fuels (>0.05 % Sulphur) may be colourless to yellow / brown , or may be dyed with green dye. This product may be dyed purple or red for taxation purposes.

Boiling Point	150°C (302°F)
Melting Point	Not applicable.
Specific Gravity	0.85 kg/L @ 15°C (Water = 1).
Vapor Pressure	1.0 kPa @ 20°C (7.5 mmHg @ 68°F).
Vapor Density	4.5 (Air = 1)
Volatility	Semivolatile to volatile
Odor Threshold	Not available.
Oil / Water Dist. Coeff.	Not available.
Viscosity (@ 40 °C)	1.3-4.1 cSt (approx.).
Solubility	Insoluble in cold water.

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Section 10. Stability and Reactivity

Stability	The product is stable.
Instability Temperature	Not available.
Conditions to Avoid	Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.
Incompatibility with Various Substances	Strong acids, peroxides, alkalis, oxidizing agents (chlorine, oxygen)
Decompostion products:	COx, SOx, smoke on combustion.
Corrosivity	Not applicable
Special Remarks on Reactivity	Incompatible with strong acids, and strong oxidizing agents (peroxides).
Special Remarks on Corrosivity	No additional remark.

Section 11. Toxicological Information

Routes of Entry	Skin contact, eye contact, inhalation, and ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 5000 mg/kg (rat).
Chronic Effects on Humans	Repeated or prolonged inhalation of vapors may lead to chronic respiratory irritation. Prolonged or repeated contact with skin may cause irritation and possibly dermatitis.
Other Toxic Effects on Humans	Inhalation of vapours or mist in high concentration may cause headaches, nausea, dizziness, drowsiness, unconsciousness and passing out. May irritate skin, eyes and respiratory tract. For more information, refer to Section 11.
Special Remarks on Toxicity to Animals	Based on API Study # 79-6, 83-09. Eye irritation index (Draize) = 0-1.3; non irritating (rabbit). Dermal primary skin irritation score (Draize) = 4-6.8; moderately to extremely irritating (rabbit).
Special Remarks on Chronic Effects on Humans	Preexisting eye, skin, respiratory, neurological, liver or kidney conditions may be aggravated by exposure to this product.
Special Remarks on Other Toxic Effects on Humans	No additional remark.

Section 12. Ecological Information

Ecotoxicity	No studies wrere found.
BOD5 and COD	BOD5 : 5.3 ug/ml (C16).
Products of Biodegradation	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Disposal	Consult your local or regional authorities. Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations.

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Section 14. Transport Information

TDG Classification	Shipping name: Diesel Fuel; UN 1202; Class 3; Packing Group III.
Special Provisions for Transport	No additional remark.

Section 15. Regulatory Information and Pictograms

Other Regulations	All components of this formulation are listed in the Domestic Substances List (DSL-Canadian) and in the Toxic Substances Control Act Inventory (TSCA-U.S.). This product is not known to contain any of the carcinogens required to be listed under OSHA hazard communication standard, 29 CFR 1910.1200 (U.S.). Not listed in EPCRA or SARA Title III, Section 313, Toxic Chemicals (40 CFR 355). Not listed in CERCLA (40 CFR 302.40). Please note that the chemical identity of some or all of the ingredients that may be listed herein is confidential business information and is being withheld as permitted by 29 CFR 1910.1200 and various State Right to Know Laws.	
Other Classifications	**WHMIS (Canada)**	B-3, D-2B
	DSD/DPD (EEC)	10- Flammable. 18- In use, may form flammable/explosive vapor-air mixture. 36/38- Irritating to eyes and skin.

WHMIS (Canada) (Pictograms)

HMIS (U.S.A.)

Health Hazard	0
Fire Hazard	2
Reactivity	0
Personal Protection	h

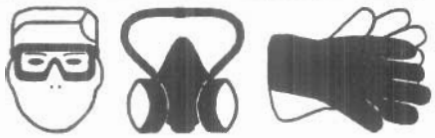
NFPA (U.S.A.)

DSD/DPD (Europe) (Pictograms)

TDG (Canada) (pictograms)

DOT (U.S.A) (Pictograms)

Protective Clothing (Pictograms)



Section 16. Other Information

References	Available upon request.
Other Special Considerations	Note 1: * Aromatic content is 50% maximum (% volume). Nil benzene present. Note 2: ** This product may be dyed purple or red for taxation purposes.

Prepared by Luc de Guire on 01/12/96.	**Data entry by May Chau.**
	Print Date: 01/16/96.

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Information Contact	Petro-Canada Product Safety Coordinator (403) 296-4410

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

PETRO-CANADA

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing
	B-2, D-2A	

Section 1. Chemical Product and Company Identification

Product Name **GASOLINE, UNLEADED**

Code	File # W102E
DSL	On the DSL list.
Print Date: 01/16/96.	

Supplier PETRO-CANADA
P.O. Box 2844, Petro-Canada Centre
Calgary, Alberta
T2P 3E3

Synonym Supreme, Regular, Unleaded Gasoline (US Grade), Mid-Grade, Super, Super Green 94.

Chemical Name Not applicable.

Chemical Family Petroleum hydrocarbons.

Chemical Formula Not applicable.

In case of Emergency
Petro-Canada Emergency Number: (403) 296-3000
Canutec Transportation Emergency: (613) 996-6666
Poison Control Centre Numbers: Consult local telephone directory for emergency number(s).

Manufacturer PETRO-CANADA
P.O. Box 2844
Petro-Canada Centre
Calgary, Alberta T2P 3E3

Material Uses Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and recreational vehicles.

Section 2. Composition/Information on Ingredients

		Exposure Limits (ACGIH)			
Name	CAS #	TLV-TWA(8 h)	STEL	CEILING	% (V/V)
Complex mixture of aliphatic and aromatic hydrocarbons (C4-C12)	8006-61-9	300 ppm (890 mg/m³)	500 ppm (1480 mg/m³)	Not available	85-100
Methyl-tert butyl ether (MTBE)	1634-04-4	40 ppm (144 mg/m³)	Not applicable	Not applicable	0-15

Section 3. Hazards Identification.

Potential Acute Health Effects Inhalation of vapours or mist may cause headaches, nausea, dizziness, central nervous system depressant; kidney and liver damage from long-term exposure in high concentrations. Defatting or drying of skin. Vapours or mist may irritate eyes. Can cause severe irritation and swelling of eye tissues (conjunctivitis). For more information, refer to Section 11.

Potential Chronic Health Effects Repeated skin exposure can produce local skin destruction, or dermatitis. Kidney and liver damage may result from long-term exposure.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. DO NOT use an eye ointment. Seek medical attention if irritation persists.

Skin Contact Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Get medical attention if redness or irritation occurs.

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Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform mouth-to-mouth resuscitation. Administer oxygen if available. Allow the victim to rest in a well ventilated area. Seek medical attention.
Hazardous Inhalation	No additional remark.
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Physician assessment mandatory.
Hazardous Ingestion	Overexposure due to ingestion is unlikely for adults since taste and smell limit the amount swallowed. Harmful or fatal is swallowed.

Section 5. Fire-fighting Measures

The Product is:	Class I - flammable liquid (NFPA).
Auto-Ignition Temperature	257°C (494.6°F) (NFPA).
Flash Points	OPEN CUP: -50 to -38°C (-58 to -36°F) (Cleveland,ASTM D92) (NFPA).
Flammable Limits	LOWER: 1.4%; UPPER: 7.6% (NFPA).
Products of Combustion	Carbon oxides (CO, CO2), smoke and irritating fumes as products of incomplete combustion.
Fire Hazards in Presence of Various Substances	Extremely flammable in presence of heat, open flames and sparks. Vapor may travel considerable distance to source of ignition and flash back.
Explosion Hazards in Presence of Various Substances	Excessive heat. Do not cut, weld, heat, or drill empty container. Runoff to sewer may create explosion hazard.
Fire Fighting Media and Instructions	Use water spray to cool fire exposed surfaces and to protect personnel. Shut off fuel to fire if it is possible to do so without hazard. If a leak or spill has not ignited, use water spray to disperse the vapours. Remotely disconnect or shut off the power sources. Either allow the fire to burn out under controlled conditions or extinquish with foam, dry chemicals or other approved extinquishing medium. Try to cover spilled liquid with foam. Avoid spraying water directly into storage containers due to danger of boilover. Avoid flushing hydrocarbon into sewers. Respiratory, eye and body protection may be required for fire fighting personnel. Emergency response to small fires with extinquishers will usually be done upwind and only if considered safe. Personal protective equipment is usually not required when using portable extinquishers. Response to larger (catastrophic) fires should only be attempted by trained fire fighters, wearing proper fire coats, boots, helmets and face shields. Self-contained breathing apparatus (SCBA) will be required if approaching the fire from downwind, or to enter enclosed areas or buildings.
Special Remarks on Fire Hazards	Vapor may travel considerable distance to source of ignition and flash back.
Special Remarks on Explosion Hazards	Runoff to sewer may create fire or explosion hazards.

Section 6. Accidental Release Measures

Small Spill	Evacuate personnel. Avoid contact. Use full protective equipment and breathing apparatus. Eliminate ignition sources. Shut off source of spill. Absorb with inert absorbent such as clay, and or diatomaceous earth, commericial sorbents, or recover using electrically grounded explosion-proof pumps. Place absorbent in closed metal containers. DO NOT FLUSH TO SEWER. Large spills may be pumped from upwind locations using vacuum trucks and extended hoses. Large pools may be covered with foam to prevent vapour evolution. Immediate shut down and evacuation if wind shifts. Constant monitoring is required.
Large Spill	Large spills may be pumped from upwind locations using vacuum trucks and extended hoses. Large pools may be covered with foam to prevent vapour evolution. Immediate shut down and evacuation if wind shifts. Constant monitoring is required.

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Section 7. Handling and Storage

Handling	Keep away from heat, spark, open flames and other sources of ignition. Empty container may contain flammable/explosive residues or vapours, DO NOT reuse empty containers without commercial cleaning or reconditioning. Ground/bond line and equipment during pumping or transfer to avoid accumulation of static charge. Avoid inhalation and contact with skin or eyes. Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods.
Storage	Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat,and sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	For normal outdoor application, special ventilation is not necessary. For indoor or confined spaces, provide explosion-proof local exhaust ventilation, or other engineering controls, to keep airborne concentration below the allowable threshold limit value. Make-up air should always by supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
Personal Protection	Splash goggles. Wear long sleeved clothing to minimize skin contact. Be sure to use a NIOSH approved respirator or equivalent. Between 300 ppm and 3000 ppm, with sufficient oxygen use an approved full-face organic vapour cartridge respirator. Above this level, use full-faced self-contained or air-suppled breathing apparatus. For casual contact, PVA gloves are suitable. For direct contact for more than 2 hours, NITRILE or VITON+NEOPRENE gloves are recommended.
Personal Protection in Case of a Large Spill	Splash goggles, full suit, boots, and gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	8-hour TLV-TWA of 300 ppm (890 mg/m³) recommended by manufacturer based on ACGIH TLV for gasoline. Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Clear liquid.
Dropping Point	Not applicable.
Penetration (@ 25°C)	Not applicable.

Odor	Gasoline. MTBE has a terpene-like odour.
Taste	Not applicable.
Color	Clear, undyed liquid (Regular); Supreme and Plus may be clear green liquid.

Boiling Point	25°C (77°F)
Melting Point	Not applicable.
Specific Gravity	0.7 kg/L @ 15°C (Water = 1).
Vapor Pressure	56.0 kPa @ 20°C (420 mmHg @ 68°F).
Vapor Density	3 to 4 (Air = 1) (NFPA, 1986).
Volatility	100% (v/v).
Odor Threshold	Less than 1 ppm.
Oil / Water Dist. Coeff.	Not available.
Viscosity (@ 40 °C)	0.6 cSt.
Solubility	Hydrocarbon components virtually insoluble in water. Soluble in alcohol, ether, chloroform, and benzene. Dissolves fats, oils and natural resins.

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Section 10. Stability and Reactivity

Stability	The product is stable.		
Instability Temperature	Not available.		
Conditions to Avoid	Heat, sparks, pilot lights, static electricity, and open flames.		
Incompatibility with Various Substances	Extremely reactive or incompatible with oxidizing agents (nitric acid, sulfuric acid, chlorine, ozones, peroxides, etc.) which cause detonation on contact.	**Decompostion products:**	COx, partially oxidized hydrocarbons, oxides of manganese, smoke on combustion.
Corrosivity	Not applicable		
Special Remarks on Reactivity	Avoid: nitric acid, sulfuric acid, chlorine, ozones, peroxides, etc., which cause detonation on contact.		
Special Remarks on Corrosivity	No additional remark.		

Section 11. Toxicological Information

Routes of Entry	Skin contact, eye contact, inhalation, and ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 12750 mg/kg (rat).
Chronic Effects on Humans	Repeated skin exposure can produce local skin destruction, or dermatitis. Kidney and liver damage may result from long-term exposure.
Other Toxic Effects on Humans	Inhalation of vapours or mist may cause headaches, nausea, dizziness, central nervous system depressant; kidney and liver damage from long-term exposure in high concentrations. Defatting or drying of skin. Vapours or mist may irritate eyes. Can cause severe irritation and swelling of eye tissues (conjunctivitis). For more information, refer to Section 11.
Special Remarks on Toxicity to Animals	*Based on API Study PS-6 on Unleaded Motor Gasoline, which quotes oral rat LD50 = 18.75 mL/kg. Dermal primary skin irritation score (Draize) = 0.98; mildly irritating (rabbit). Eye irritation index (Draize) = 0; non irritating (Rabbit).
Special Remarks on Chronic Effects on Humans	Long term exposure to high concentration of gasoline can damage kidney in male rats.
Special Remarks on Other Toxic Effects on Humans	No additional remark.

Section 12. Ecological Information

Ecotoxicity	Fresh water Bluegill: LC50: 8 ppm/96h; saltwater Mullet: LC50: 4 ppm/96h (OHM/TADS, 1990).
BOD5 and COD	BOD5: 8%.
Products of Biodegradation	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Continued on Next Page

Section 13. Disposal Considerations

Waste Disposal	Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations. Consult your local or regional authorities.

Section 14. Transport Information

TDG Classification	Shipping Name: Unleaded Gasoline; UN 1203; Class 3; Packing Group II.
Special Provisions for Transport	No additional remark.

Section 15. Regulatory Information and Pictograms

Other Regulations		CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): This product is on the Domestic Substances List (DSL), and is acceptable for use under the provisions of CEPA. All components of this formulation are listed in the Domestic Substances List (DSL-Canadian) and in the Toxic Substances Control Act Inventory (TSCA-U.S.). Please note that the chemical identity of some or all of the ingredients that may be listed herein is confidential business information and is being withheld as permitted by 29 CFR 1910.1200 and various State Right to Know Laws.
Other Classifications	**WHMIS (Canada)**	B-2, D-2A
	DSD/DPD (EEC)	5- Heating may cause an explosion. 12- Extremely flammable. 18- In use, may form flammable/explosive vapor-air mixture. 36/37/38- Irritating to eyes,respiratory system and skin. 40- Possible risks of irreversible effects. 45- May cause cancer.

WHMIS (Canada) (Pictograms)

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	3
Reactivity	0
Personal Protection	h

NFPA (U.S.A.)

DSD/DPD (Europe) (Pictograms)

TDG (Canada) (pictograms)

DOT (U.S.A) (Pictograms)

Protective Clothing (Pictograms)

Continued on Next Page

Section 16. Other Information

References	Available upon request.
Other Special Considerations	Note 1: * Contains trace amounts of conventional gasoline additives such as antioxidant, MMT (organo-manganese compound) and dye. May also contain methyl-tert-butyl ether (MTBE), Cas # 1634-04-4, up to 15% volume and benzene from 0-5% volume.

Prepared by May on 01/11/96.	**Data entry by May Chau.**
	Print Date: 01/16/96.

Information Contact	**Petro-Canada** **Product Safety Coordinator** **(403) 296-4410**

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*                          M S D S                                *
*                                                                 *
*  Canadian Centre for Occupational Health and Safety             *
* * * * * * * * * * * * * * * Issue : 95-4 (November, 1995)      *

                          *** IDENTIFICATION ***

MSDS RECORD NUMBER       : 995229
PRODUCT NAME(S)          : KEROSENE TYPE AVIATION TURBINE FUEL
                           ESSO JET A
                           ESSO JET A1
                           ESSO TURBO FUEL A
                           ESSO TURBO FUEL A1
                           JET A
                           JET A1
                           TURBO FUEL A
                           TURBO FUEL A1
                           TURBO FUEL A1 F34
                           TURBO FUEL A1-JP8
PRODUCT IDENTIFICATION   : MSDS Number : 000111
DATE OF MSDS             : 1995-05-18

                      *** MANUFACTURER INFORMATION ***

MANUFACTURER             : Imperial Oil (Products Division)
ADDRESS                  : 111 St Clair Avenue West
                           Toronto  Ontario
                           Canada     M5W 1K3
                           Telephone:  416-968-4111

                  *** SUPPLIER/DISTRIBUTOR INFORMATION ***

SUPPLIER/DISTRIBUTOR     : Imperial Oil (Products Division)
ADDRESS                  : 111 St Clair Avenue West
                           Toronto  Ontario
                           Canada     M5W 1K3
                           Telephone:  416-968-4111

                           *** MATERIAL SAFETY DATA ***


   Date Prepared: May 18, 1995
   Supersedes: April 13, 1994
MSDS Number : 000111
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1. PRODUCT INFORMATION

Product Identifier: KEROSENE TYPE AVIATION TURBINE FUEL
ESSO JET A
ESSO JET A1
ESSO TURBO FUEL A
ESSO TURBO FUEL A1
JET A
JET A1
TURBO FUEL A

TURBO FUEL A1
TURBO FUEL A1 F34
TURBO FUEL A1-JP8

Application and Use:
Kerosene-type aviation fuel for turbine-powered aircraft

Product Description:

A mixture of aliphatic and aromatic hydrocarbons and additives.

REGULATORY CLASSIFICATION

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

TRANSPORTATION OF DANGEROUS GOODS INFORMATION

Shipping Name:	Fuel,Aviation,Turbine engine	
Class:	Flammable liquid 3.3	Packing Group: III
PIN Number:	UN1863	Guide Number: 121

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

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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 Hydrocracked Distillate	0-100 V/V	64741-77-1	
Ethylene Glycol Monomethyl Ether	0-0.15 V/V	109-86-4	LD50:2.4g/kg,orl,rat LD50:0.8g/kg,orl,r
Diethylene Glycol Monomethyl	0-0.15 V/V	111-77-3	LD50:9.2g/kg,orl,rat