Spill or Leak Procedures: Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended. Stay upwind and away from spill/release. Notify persons downwind of spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material (e.g., sand or vermiculite). Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. **If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).**

7. HANDLING STORAGE

Handling: Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharge. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Do not enter confined spaces such as tanks or pits without following proper entry procedures such 29 CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Section 8). Wash thoroughly after handling. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practice.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks or other sources of ignition. They may explode and cause injury bunged, and promptly shipped to the supplier or a drum conditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA Regulations, ANSI Z49.1 and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame". Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

Substance Name	CAS No.	Agency	Limits	Notes
Fuel, diesel, C_{8-28}-alkane rich and Methyl-branched alkane rich.	437986-25-9	OSHA	PEL TWA 5 mg/m^3	
		ACGIH	TLV TWA 5 mg/m^3	
		ACGIH	STEL 10 mg/m^3	

Note: Country, state, local, or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Personal Protective Equipment (PPE) and Protective Measures

Respiratory Protection: A NIOSH certified air-purifying respirator with an organic vapor cartridge may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air-supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Protective Clothing: Not required based on the hazards of the material. However, it is considered good practice to wear gloves when handling chemicals.

Eye/Face Protection: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Additional Protective Measures: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).
A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL & CHEMICAL PROPERTIES

Note: Unless otherwise indicated, values are determined at 68°F (20°C) and atmospheric pressure (760 mm Hg). Data is typical, individual samples may vary.

Flash Point (PMCC): 125-140°F (51.5-60°C)
Autoignition Temperature: no data
Appearance: Colorless *(may contain a dye)*
Physical State: Liquid
Odor: Odorless to mild paraffin
Vapor Pressure: <2 psi @ 20°C
Vapor Density (air = 1): >1
Viscosity at 40°C: 1.9-4.1 cP
Approx. Boiling Range: 320-720°F (160-382°C)
Freezing Point: <32°F (<0°C)
Solubility in water: Insoluble
pH: not applicable
Density: 0.77 g/ml@ 15°C

10. STABILITY & REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling. Combustible liquid. Vapor from heated liquid can cause a flash fire.

Conditions to Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Incompatible Materials: Avoid contact with strong oxidizing agents.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

No definitive information available on carcinogenicity, mutagenicity, target organs or developmental toxicity. Diesel engine exhaust has been classified as a Group 2a Carcinogen (probably carcinogenic to humans) by IARC. See information in Section 3.

12. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA "characteristic" hazardous waste due to the characteristic of ignitability (D001). If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent than the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container rinse material could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

13. TRANSPORT INFORMATION

	USA DOT	
Shipping Name:	Flammable Liquid, n.o.s. (Paraffins and isoparaffins)	
Hazard Class & Div.:	3 (Flammable Liquid)	
ID Number:	UN1993	
Packing Group:	III	
Label(s):	Not applicable	
Placard(s):	Flammable	
Notes:	1	

1.	Static Accumulator (50 picosiemens or less) unless performance additive has been added to mitigate static accumulation – consult appropriate product data sheet.

14. REGULATORY INFORMATION

This material is listed on the following country inventory lists: no data

This material contains the following list of chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372: none known

This material contains the following list of chemicals subject to the reporting requirements of California Proposition 65: none known

NTP, IARC, or OSHA has not identified this material as a carcinogen. Diesel exhaust has been listed as a potential carcinogen.

EPA (CERCLA) reportable quantity: none known

For details on your regulatory requirements you should contact the appropriate agency in your state or country.

15. DOCUMENTARY INFORMATION

Current Issue Date: 12 Nov 2004 Previous Issue Date: 30 Aug 2003

16. DISCLAIMER OF EXPRESSED & IMPLIED WARRANTIES

The information in this document is believed to be correct as of the date issued. The product is the subject of continued further experimentation and testing. HOWEVER, NO WARRANTY OF MERCHANT LIABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. This information and product are furnished on the condition that the person receiving them shall make his/her own determination as to the suitability of the product for his/her particular purpose and on the condition that he/she assume the risk of his/her use thereof.

41-020
Revision
Number: 8

Shell Canada Limited

Material Safety Data Sheet

Effective Date: 2002-08-14
Supersedes: 2001-01-08

Class B2 Flammable Class D2B Other Toxic Class D2A Other Toxic Liquid Effects - Skin Irritant Effects - Carcinogen

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: **SHELL JET B WITH ANTI-ICING ADDITIVE** SYNONYMS: WIDE BOILING RANGE AVIATION TURBINE FUEL PLUS ANTI ICING ADDITIVE

PRODUCT USE: Fuel
MSDS Number: 141-020

MANUFACTURER
Shell Canada Limited
P.O. Box 100, Station M
400-4th Ave. S.W.
Calgary, AB Canada
T2P 2H5

TELEPHONE NUMBERS
Shell Emergency Number 1-800-661-7378
CANUTEC 24 HOUR EMERGENCY NUMBER 613-996-6666
For general information: 1-800-661-1600
For MSDS information: 403-691-3982
(From 7:30 to 4:30 Mountain Time) 403-691-2220

This MSDS was prepared by the Toxicology and Product Stewardship Section of Shell Canada Limited.

*An asterisk in the product name designates a trade-mark(s) of Shell Canada Limited, used under license by Shell Canada Products.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	% Range	WHMIS Controlled
Naphtha (Petroleum), Full-range Reformed	68919-37-9	>95	Yes
Benzene	71-43-2	0.5 - 1.5	Yes

See Section 8 for Occupational Exposure Guidelines.

3. HAZARDS IDENTIFICATION

Physical Description: Liquid Bright Clear Typical Gasoline Odour

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Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

Hazards:

Flammable Liquid.
Irritating to skin.
Contains Benzene.
May cause cancer
Vapours are moderately irritating to the eyes.
Vapours are moderately irritating to the respiratory passages. The liquid when accidently aspirated into the lungs can cause a severe inflammation of the lung.
Excessive exposure to benzene may cause leukemia in man.

Handling:

Eliminate all ignition sources.
Wear suitable gloves and eye protection.
Bond and ground transfer containers and equipment to avoid static accumulation.
Avoid prolonged exposure to vapours.
Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and open flames. For further information on health effects, see Section 11.

4. FIRST AID

Eyes: Flush eyes with water for at least 15 minutes while holding eyelids open. If irritation occurs and persists, obtain medical attention.

Skin: Wash contaminated skin with mild soap and water for 15 minutes. If irritation occurs and persists, obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING! OBTAIN MEDICAL ATTENTION IMMEDIATELY. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs.

Inhalation: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

Notes to Physician: The main hazard following accidental ingestion is aspiration of the liquid into the lungs producing chemical pneumonitis. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Dry Chemical Carbon Dioxide Foam Water Fog

1
4
1
-
0
2
0

Revision Number: 8

Firefighting Instructions: Extremely flammable. Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Vapours may travel along ground and flashback along vapour trail may occur. Flashback may occur along vapour trail. Do not use water except as a fog. Use water to cool fire exposed containers. Product will float and can be reignited on surface of water. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Always stay away from ends of containers due to explosive potential. Fight fire from maximum distance.

Hazardous Combustion Products: A complex mixture of airborne solid, liquid, particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon dioxide, carbon monoxide and unidentified organic compounds may be formed upon combustion.

6. ACCIDENTAL RELEASE MEASURES

Issue warning "Flammable". Eliminate all ignition sources. Handling equipment must be grounded. Isolate hazard area and restrict access. Try to work upwind of spill. Avoid direct contact with material. Saturated clothing should be immediately removed to avoid flammability hazard. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal. Recommended materials: Clay or Sand . Flush area with water to remove trace residue. Dispose of recovered material as noted under Disposal Considerations. Notify appropriate environmental agency(ies).

7. HANDLING AND STORAGE

Handling: Extremely flammable. Avoid excessive heat, sparks, open flames and all other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Vapours are heavier than air and will

settle and collect in low areas and pits, displacing breathing air. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Do not cut, drill, grind, weld or perform similar operations on or near containers. Empty containers are hazardous, may contain flammable/explosive dusts, residues or vapours. Do not pressurize drum containers to empty them. Never siphon by mouth. Wash with soap and water prior to eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing prior to reuse. Use good personal hygiene.

Storage: Use explosion-proof ventilation to prevent vapour accumulation. Keep container tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

THE CONDITIONS OF USE.

OCCUPATIONAL EXPOSURE LIMITS (Current ACGIH TLV/TWA unless otherwise noted):

North American exposure limits have not been established for the product.
Consult local authorities for
acceptable provincial values.
Recommend SHELL guideline of 125 mg/m3 for vapours (8 hour shift).
Gasoline: 300 ppm (STEL: 500 ppm)
Benzene (skin) : 0.5 ppm (STEL: 2.5 ppm)

Mechanical Use explosion-proof ventilation as required to control vapour concentrations.

Ventilation: Concentrations in air should be maintained below lower explosive limit at all times or below the recommended threshold limit value if unprotected personnel are involved. Make up air should always be supplied to balance air exhausted (either generally or locally). 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.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

Skin Protection: Impervious gloves (viton, nitrile) should be worn at all times when handling this material. In confined spaces or where the risk of skin exposure is much higher, impervious clothing should be worn. Safety showers should be available for emergency use.

Respiratory Protection:	If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use a NIOSH-approved chemical cartridge respirator with organic vapour cartridges or use a NIOSH-approved supplied-air respirator. For high airborne concentrations, use a NIOSH-approved supplied-air respirator, either self-contained or airline breathing apparatus, operated in positive pressure mode.

9. PHYSICAL DATA

Physical State:	Liquid
Appearance:	Bright Clear
Odour:	Typical Gasoline Odour
Odour Threshold:	Not available
Freezing/Pour Point:	<-51 degrees C
Boiling Point:	60 - 260 degrees C
Density:	750 - 801 kg/m3 @ 15 degrees C
Vapour Density (Air = 1):	Not available
Vapour Pressure (absolute):	>42 mm Hg @ 38 degrees C
pH:	Not applicable
Flash Point:	Method Tag Closed Cup <1 degrees C
Lower Explosion Limit:	1 % (vol.)
Upper Explosion Limit:	7 % (vol.)
Autoignition Temperature:	Not available
Viscosity:	Not available

Evaporation Rate (n-BuAc = 1): Not available **Partition Coefficient (K_{ow}):** Not available **Water Solubility:** Insoluble

 Other Solvents: Hydrocarbon Solvents

10. STABILITY AND REACTIVITY

Chemically Stable:	
Hazardous Polymerization:	
Sensitive to Mechanical Impact:	
Sensitive to Static Discharge:	
Hazardous Decomposition Products:	
Incompatible Materials:	
Conditions of Reactivity:	

YesNoNoYesThermal decomposition products are highly dependent on combustion conditions.Avoid contact with strong oxidizing agents and acids.Avoid excessive heat, open flames and all ignition sources.

11. TOXICOLOGICAL INFORMATION

Ingredient (or Product if not specified)	Toxicological Data
Naphtha (Petroleum), Full-range Reformed	LD50 Oral Rat >28 mL/kg
Benzene	LD50 Oral Rat = 930 - 5600 mg/kg LC50 Inhalation Rat = 13700 ppm for 4 hours

Routes of Exposure: Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

Irritancy: This product is expected to be irritating to skin but is not predicted to be a skin sensitizer.

Chronic Effects: Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, blurred vision and central nervous system depression. Prolonged and repeated exposure may cause serious injury to blood forming organs, resulting in anemia and similar conditions.

Pre-existing Conditions: Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

Carcinogenicity and Mutagenicity: This product contains benzene. Epidemiological studies indicate that long term inhalation of benzene vapour can cause leukaemia in man. Benzene has also produced chromosomal aberrations in peripheral blood lymphocytes. Carcinogenic hazard.

12. ECOLOGICAL INFORMATION

Environmental Effects:

Biodegradability:

Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. May be harmful to aquatic life. May cause physical fouling of aquatic organisms. Not readily biodegradable. Potential for bioaccumulation.

13. DISPOSAL CONSIDERATIONS

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Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority

14. TRANSPORTATION INFORMATION

Canadian Road and Rail Shipping Classification:

UN Number	UN1863
Proper Shipping Name	FUEL, AVIATION, TURBINE ENGINE
Hazard Class	Class 3 Flammable Liquids
Packing Group	PG II
Shipping Description	FUEL, AVIATION, TURBINE ENGINE Class 3 UN1863 PG II

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Class:	Class B2 Flammable Liquid Class D2B Other Toxic Effects - Skin Irritant Class D2A Other Toxic Effects - Carcinogen
DSL/NDSL Status:	This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act. This product and/or all components are listed on the U.S. EPA TSCA Inventory.
Other Regulatory Status:	No Canadian federal standards.

16. ADDITIONAL INFORMATION

LABEL STATEMENTS

Hazard Statement :	Flammable Liquid. Irritating to skin. Contains Benzene. May cause cancer.
Handling Statement:	Eliminate all ignition sources. Wear suitable gloves and eye protection. Bond and ground transfer containers and equipment to avoid static accumulation. Avoid prolonged exposure to vapours. Empty containers are hazardous, may contain flammable / explosive dusts, liquid residue or vapours. Keep away from sparks and

open flames.

First Aid Statement : Wash contaminated skin with soap and water. Flush eyes with water. If overcome by vapours remove to fresh air. Do not induce vomiting. Obtain medical attention.

Revisions: This MSDS has been reviewed and updated.
Changes have been made to:

Section 14

APPENDIX B – NWT SPILL REPORT FORM

Northwest Territories

NWT SPILL REPORT (Oil, Gas, Hazardous chemicals or other materials)

24–Hour Report Line
Phone:(867) 920-8130
Fax: (867) 873-6924

A Report Date and Time	B Date and Time of Spill (if known)	C ☐ Original Report ☐ Update No.	Spill Number
D Location and map coordinates (if known) and direction (if moving)			
E Party Responsible for Spill			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible)			
G Cause of spill			
H Is spill terminated? ☐ yes ☐ no	I If spill is continuing give estimated rate	J Is further spill possible? ☐ yes ☐ no	K extent of contaminated area in m^2
L Factors affecting spill or recovery (weather conditions, terrain snow cover etc).		M Containment (natural depression, dyke etc)	
N Action, if any, taken or proposed to contain , recover, clean up or dispose of product(s) and contaminated materials			
O Do you require assistance? ☐ no ☐ yes	P Possible hazards to persons, property, or environment; eg: fire, drinking water, fish or wildlife.		

Q Comments and/or recommendations	FOR SPILL LINE USE ONLY
	Lead Agency
	Spill Significance
	Lead Agency contact and time
	Is this file now closed? ☐ yes ☐ no

Reported by:	Position, Employer, Location	Telephone No:
Reported to:	Position, Employer, Location	Telephone No:

APPENDIX C – How To Activate the Spill Contingency Plan

HOW TO ACTIVATE THE SPILL CONTINGENCY PLAN

In the event of any leak, spill or system failure, steps taken by company personnel at the spill site are as follows:

- Be alert, ensure your safety and the safety of others first;
- Assess the hazard to persons in the vicinity of the spill or leak;
- Assess nature and status of the spill, leak or system failure and measures to be taken to bring the situation under control;
- When safe to do so, stop the flow of the spilled material;
- Report the spill, leak of container, immediately to the On-Scene Coordinator so that person can ensure that the responsible regulator is notified by contacting the NWT 24-Hour Spill Line at (867) 920-8130 or fax (867) 873-6924 and DIAND Water Resources Inspector at (867)975-4298;
- Resume safe, effective actions to contain, stop the flow of spilled product or clean up the incident; and
- Record all information on the status of the situation. Take photographs of the site (if possible) before the clean up and after the clean up has been completed.

ACTION PLAN FOR SPILL OF DIESEL FUEL

Initial Spill Responses:

- STOP the flow if possible;
- CONTAIN flow of oil by dyking, barricading or blocking flow by any means available. Use earth moving equipment if practical;
- ELIMINATE, open flame ignition sources;
- If flow has reached any natural stream, mobilize team to deploy river boom, and sorbent booms; and
- If possible, pump fuel into other appropriate tankage/containers.

Hazards:

- Flammable
- Slightly toxic by ingestion, highly toxic if aspired

Action for Fire:

- Use carbon dioxide, dry chemical, foam, or water spray (fog), although water may spread the fire;
- Use fog streams to protect rescue teams and trapped people;
- Use water to cool surface of tanks;
- Divert the diesel fuel to an open area and let it burn off under controlled conditions;
- If the fire is put out before all diesel is consumed, beware of re-ignition;
- Where diesel fuel is running downhill, try to contain it as quickly as possible; and
- Rubber tires are almost impossible to extinguish, have affected vehicles removed from the danger zone.

Recovery:

- Unburned diesel fuel can be soaked up by sand and peat moss, of by chemical sorbents such as Grabil or Conwed;
- If practical, contaminated soil should be excavated;
- Diesel fuel entering the ground should be recovered by digging sumps or trenches; and
- Diesel fuel on a water surface should be recovered by skimmers or sorbent booms. (See Section on Recovery of Oil Spills)

Disposal:

- Incineration under controlled conditions; and
- Burial at an approved site.

Properties:

- Chemical composition mixture of hydrocarbons in the range C9 to C18;
- Clear, oily liquid; and
- Not soluble, floats on water

Environmental Threat:

- Moderately toxic to fish and other aquatic organisms;
- Harmful to waterfowl; and
- May create visual film on water and shorelines.

Containers:

- Transported by appropriate methods to acceptable storage, (typically 205 litre drums); and
- Bulk transportation and storage.

ACTION PLAN FOR ETHYLENE GLYCOL (ANTIFREEZE) SPILL

Initial Spill response:

- STOP the flow at source if possible;
- ELIMINATE open flame ignition sources;
- CONTAIN flow of liquid by dyking, barricading or blocking flow by any means available; and
- PREVENT antifreeze from entering any flowing streams

Hazards:

- Moderately toxic by ingestion and inhalation; and
- Flammable.

Action for Fire:

- Use carbon dioxide, dry chemical, foam or water spray (fog);

Recovery:

- Ethylene glycol antifreeze can be soaked up by peat moss or by commercial sorbents such as Hazorb; and
- Access to spilled or recovered ethylene glycol by mammals should be prevented.

Disposal:

- Incineration under controlled conditions; and
- Burial at an approved site.