Toronto, Ontario
M5W 1K3
(800) 268-3183

CAUTION: " The information contained herein relates only to this product or material and may not be valid when used in combination with any other product or material or in any process. If the product is not to be used for a purpose or under conditions which are normal or reasonably foreseeable, this information cannot be relied upon as complete or applicable. For greater certainty, uses other than those described in Section 1 must be reviewed with the supplier. The information contained herein is based on the information available at the indicated date of preparation. This MSDS is for the use of Imperial Oil customers and their employees and agents only. Any further distribution of this MSDS by Imperial Oil customers is prohibited without the written consent of Imperial Oil."

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: July 28, 2001
Supersedes: July 29, 1998
MSDS Number: 05983

1. PRODUCT INFORMATION

Product Identifier: DDR GREASE

Application and Use:
Lubricating grease

Product Description:

A grease, a mixture of lubricating oil, soap and additives.

REGULATORY CLASSIFICATION

WHMIS:
Class D, Division 2, Subdivision A: Very 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):
Not Regulated in Canada.

Please be aware that other regulations may apply.

TELEPHONE NUMBERS		MANUFACTURER/SUPPLIER:
Emergency 24 hr.	(519) 339-2145	IMPERIAL OIL
Technical Info.	(800) 268-3183	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 #	
SODIUM BORATE	0.1-1 W/W	1330-43-4	2.66 g/kg ing rat > 2.0 g/kg skn rbt

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: >20.00 cSt at 40 deg C
Vapour Density: not available
Boiling Point: not available
Evaporation rate: <0.1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: 300 deg C DROP
Odour Threshold: not available
Vapour Pressure: <1 kPa at 38 deg C
Density: >1.00 g/cc
Appearance/odour: Light tan grease with a mild bland odour.

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

Negligible hazard at normal temperatures (up to 38 deg C).
Elevated temperatures or mechanical action may form vapours, mists or fumes which may be irritating to the eyes, nose, throat and lungs.
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.
Certain components present in this material may be absorbed through the skin in toxic quantities.

High pressure greasing equipment is capable of injecting grease under the skin which may have severe health consequences.

INGESTION:

Low toxicity.

CHRONIC:

Prolonged and/or repeated exposure may cause reproductive system disorder and/or damage and may cause birth defects (teratogenic effects) in offspring.

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:

ACGIH recommends:
For oil mists, 5 mg/m3.
For sodium tetraborate pentahydrate, 1 mg/m3.

Local regulated limits may vary.

5. FIRST AID MEASURES

INHALATION:

In case of adverse exposure to vapours, mists and/or fumes formed at elevated temperature, or by mechanical action, 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.
Consult a physician immediately if the material is injected under the skin from the misuse of high pressure greasing equipment.

INGESTION:

If swallowed, DO NOT induce vomiting. 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.

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.
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.
Allow material to solidify and scrape up. Place material in suitable containers for recycle or disposal.
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: 160 deg C COC ASTM D92

Autoignition: NA Flammable Limits: LEL: NA UEL: NA

GENERAL HAZARDS:

Low Hazard; liquids may burn upon heating to temperatures at or above the flash point.
Toxic gases will form upon combustion.

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.
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 and traces of oxides of sulphur

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.

Three year WHMIS review.

REVISION SUMMARY:
Since 29 July 1998, this MSDS has been revised in Section(s):
2, 9

10. PREPARATION

Date Prepared: July 28, 2001
Prepared by: Lubricants & Specialties
IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(800) 268-3183

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MATERIAL SAFETY DATA SHEET

I - PRODUCT IDENTIFICATION

MANUFACTURER: DANA CHEMICALS INC.
3532 GRIFFITH
ST-LAURENT, QUEBEC, CANADA H4T 1A7

PRODUCT NAME: DERMAGEL (DERMA · KLEEN)
PRODUCT USE: Waterless hand cleaner
WHMIS CLASSIFICATION: B-3 ; D-2B
TDG CLASSIFICATION: Not regulated

II - PHYSICAL DATA

PHYSICAL STATE: Firm, non-flowing creamy gel
APPEARANCE & ODOUR: Green with cherry scent
BOILING POINT °C: 100 - 220
DENSITY/SPECIFIC GRAVITY (WATER=1): 0.90 - 1.05 (20°C)
WATER SOLUBILITY: Emulsion
VAPOUR PRESSURE AT 20°C (mMHg): N/A
VAPOUR DENSITY (AIR=1): Heavier than air
EVAPORATION RATE (BUTYL ACETATE=1): Slower than ether

III - HAZARDOUS INGREDIENTS

CHEMICAL IDENTITY	% CONCENTRATION	LD50/LC50/T.L.V.
Solvent Blend	10 - 50	T.L.V.=100ppm (ACGIH 1980)
Silicone Dioxide (CAS 14808-60-7)	10 - 50	T.L.V-T.W.A.=0.1mg/m^3 (RESPIRABLE DUST)

IV FIRE AND EXPLOSION INFORMATION

FLASH POINT AND METHOD: 56°C (TCC) minimum
AUTO-IGNITION TEMPERATURE °C: N/A
FLAMMABLE LIMITS (% IN AIR): N/A
FIRE & EXPLOSION HAZARDS: Vapours are heavier than air, may travel and be ignited by sparks, flames, static charges or other ignition sources.
EXTINGUISHING MEDIA: Foam, water fog, dry chemical, carbon dioxide.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus with a full face piece.

V - REACTIVITY DATA

STABILITY: Stable.
INCOMPATIBILITY: Strong oxidizing and reducing agents.
HAZARDOUS DECOMPOSITION: Carbon monoxide and carbon dioxide produced on combustion.
HAZARDOUS POLYMERIZATION: None.

VI - TOXICOLOGICAL PROPERTIES

EFFECTS OF OVER EXPOSURE

EYE CONTACT: Irritation, stinging or burning of eyes. May cause abrasive damage.
SKIN CONTACT: Moderately irritating.
INHALATION: Moderately irritating under normal use conditions.
INGESTION: Low toxicity, but aspiration into lungs during swallowing or subsequent vomiting may cause severe lung irritation.

VII - EMERGENCY AND FIRST AID MEASURES

EYES: Immediately flush with plenty of water for at least 15 minutes while keeping eyelids apart. Get medical attention.
SKIN: Rinse with water.
INHALATION: Remove victim to fresh air and restore breathing if required.
INGESTION: Do not induce vomiting. Get medical attention immediately.

VIII - PREVENTATIVE MEASURES

EYE PROTECTION: N/A
PROTECTIVE CLOTHING: N/A
RESPIRATORY PROTECTION: N/A
VENTILATION: Local exhaust desirable. General mechanical ventilation should be used to maintain below T.L.V. levels.
PROTECTIVE EQUIPMENT: Maintain eyewash fountain nearby.
HANDLING PROCEDURES: Avoid contact with eyes. Avoid excessive inhalation of vapours. Keep away from sparks and flame.
STORAGE REQUIREMENTS: Keep container closed when not in use. Store in a cool, dry and well-ventilated area away from oxidizing and reducing agents, heat and all sources of ignition.
SPILLS OR LEAKS: For large spills eliminate all sources of ignition. Wear adequate respiratory protection. Absorb with absorbent material and remove to a container.
WASTE DISPOSAL: Dispose of waste according to federal, provincial and local regulations.

IX - PREPARATION OF INFORMATION

PREPARED BY: Salem Daniel, M.Sc. (514) 731-6836 DERMAGEL JANUARY / 04

SECTION I-MATERIAL IDENTIFICATION AND USE

Material Name/Identifier:	Diesel Fuel Oil Conditioner	Stock No.	991/992/993/994/995/998
Manufacturer's Name:	Kleen-Flo Tumbler Industries Ltd	Street Address:	75 Advance Blvd.
City:	Brampton	Province:	Ontario
Postal Code:	L6T 4N1	Emergency Phone #:	(905) 793-4311
Chemical Name:	N/A (mixture)	Chemical Family:	Blend of aliphatic alcohol & aromatic hydrocarbons.
Chemical Formula:	N/A (Mixture)	Trade Names & Synonyms:	No
Material Use:	Conditioner/Cleaner	Molecular Weight:	N/A (Mixture)

SECTION II-HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	C.A.S.	Approximate Concentration	LD50 Species & Route	LC50 Species & Route
2-propanol	67-63-0	60-90%	5 g/kg rat-oral	12000 ppm (8hr) rat-inh.
Dimethyl benzene	1330-20-7	10-30%	4.3 g/kg rat-oral	5000 ppm (4hr) rat-inh.
Ethyl benzene	100-41-4	1 - 5%	3.5 g/kg rat-oral	N/A

SECTION III-PHYSICAL DATA FOR MATERIAL

Physical State:	Liquid	Odour/Appearance:	Colourless, water white liquid, alcohol odour
Specific Gravity:	0.8 @ 15°C	Odour Threshold(p.p.m.):	N/E
Boiling Point:	82-137°C	Evaporation Rate:	N/E
Freezing Point:	N/A	Solubility in Water:	87%
% Volatile(by volume):	100%	Vapour Pressure(mm)Hg:	4.4 kPa at 20°C
Vapour Density(Air=1):	2.2	Coefficient of Water/Oil Distribut:	3.5
pH	N.Ap.		

SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability Yes/No	Yes	If yes under which conditions?	Can be ignited under normal temp. conditions.
Auto Ignition Temperature	N/E	Means of Extinction:	Alcohol Foam, carbon dioxide
Flashpoint and Method:	11°C	Hazardous Combustion Products:	Carbon monoxide,
	Tag closed cup	carbon dioxide, hydrocarbon fumes & smoke	
Upper Flammable limit		Lower Flammable Limit(% by volume):	2%
(% by volume):	12%		
Explosion Data:	Sensitivity to Mech. Impact: Use only non-sparking tool	Sensitivity to Static Discharge:	Yes use grounded equipment

SECTION V-REACTIVITY DATA

Chemical Stability Yes/No:	Yes	If NO under which conditions?	N.Ap.
Incompatibility to Other Substances Yes/No:	Yes	If so which ones?	Avoid contact with strong oxidizing materials, it may react with aluminum at high temp.
Reactivity and under what conditions?	Normally stable but can become unstable at elevated temp. and pressure.		
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide produced on combustion.		

N/E: not established N.Ap.: not applicable N/A: not available

SECTION VI-TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry:	--SKIN CONTACT -x-SKIN ABSORPTION -x-EYE CONTACT -x-INHALATION -x-INGESTION		
Effects of Acute Exposure:	May cause slight eye irritation, headaches, nausea, dizziness, drowsiness and central nervous system depression.		
Effects of chronic exposure:	High exposure to dimethylbenzene to some animal studies have been reported to cause health effects on		
	developing embryo/fetus. These effects were often at levels toxic to mother. The significance of these findings has		
	not been determined.		
LD 50 of Product:	5gm/kg rat-oral	LC 50 of Product:	>12000 ppm rat-inh.
Irritancy of Product:	skin and eye irritant	Exposure limits of products: 2-propanol- 400 ppm,	
Sensitization of Product:	N/A	ethyl benzene- 100 ppm, xylene- 100 ppm	
		Toxicologically Synergistic Materials:	N/A
--CARCINOGENICITY --REPRODUCTIVE EFFECTS --TERATOGENICITY --MUTAGENICITY			none known

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

Gloves(specify):	Nitrile, viton & polyethylene	Eye(specify):	Chemical safety glasses
Respiratory(specify):	Organic canister mask	Clothing: Plastic apron	Footwear: Oil resistant soles.
Respiratory Protection:	If used indoors or on a continuous basis, use of cartridge type respirator is recommended		

SECTION VII-PREVENTIVE MEASURES

Personal Protective Equipment to be used:

Gloves(specify):	Nitrile, viton & polyethylene	Eye(specify):	Chemical safety glasses
Respiratory(specify):	Organic canister mask	Clothing: Plastic apron	Footwear: Oil resistant soles.
Respiratory Protection:	If used indoors or on a continuous basis, use of cartridge type respirator is recommended		

Handling procedure & Equip.	Use spark resistant tools and equipment for transfers.
Leak and Spill Procedure:	Dyke and contain land spill. Soak residue with natural absorbent.
Waste Disposal:	Incineration or dispose at an approved waste disposal facility.
Storage Requirements:	Keep in a cool place.
CEPA & DSL	All ingredients in the product are included in the DSL and are exempted from CEPA requirements.
TDG Classification	991/992/993 : Consumer Commodity, 994/995/996/998 as follows:
	Flammable liquids, N.O.S.* (2-propanol/Xylene), Class 3, UN 1993, Pkg.Gr.II
WHMIS Classification:	991/992/993 - Consumer Commodity, #994/995/998 - Class B2, D2B & D2A

SECTION VIII-FIRST AID MEASURES

Eye:	Flush with water for at least 15 minutes.
Skin:	Wash with soap and water
Inhalation:	Remove to fresh air and restore breathing if required.
Ingestion:	Contains petroleum distillate. Do not induce vomiting. Guard against aspiration into lungs.

SECTION IX-PREPARATION DATE OF M.S.D.S.

Additional Info/Comments:		Sources Used: NOISH Registry of Toxic Effects of Chemical Substances Shell Data	
Phone Number:	(905) 793-4311	Prepared By: Quality Control Laboratory	
Date:	March 3rd. 2003	Kleen-Flo Tumbler Industries Limited	

THIS SHEET SUPERSEDES ANY OTHER M.S.D.S. PREVIOUSLY PREPARED

N/A: not available N/E: not established

Esso Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: November 06, 2002
Supersedes: November 01, 2002
MSDS Number: 05487

1. PRODUCT INFORMATION

Product Identifier: DIESEL, MINES SPECIAL-LS (DYED OR CLEAR)
ESSO MINES DIESEL FUEL (DYED OR CLEAR)
DIESEL MINES (DYED OR CLEAR)
MINES DIESEL FUEL (DYED OR CLEAR)

Application and Use:
Motor diesel fuel, for use in underground mining operations

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

Marine Pollutant:N

Please be aware that other regulations may apply.

TELEPHONE NUMBERS		MANUFACTURER/SUPPLIER:
Emergency 24 hr.	(519) 339-2145	IMPERIAL OIL
Technical Info.	(800) 268-3183	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 #	
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: 1.95 cSt at 40 deg C
Vapour Density: 4
Boiling Point: 180 to 325 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: 0.84 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:

ACGIH recommends:
ACGIH recommends a TWA of 100 mg/m3 total hydrocarbon for diesel fuel

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.

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: >52 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.

REVISED.

10. PREPARATION

Date Prepared: November 06, 2002
Prepared by: Lubricants & Specialties
IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(800) 268-3183

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Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: March 22, 2003
Supersedes: October 24, 2000
MSDS Number: 08064

1. PRODUCT INFORMATION

Product Identifier: ESSO GEAR OIL GX 80W-90

Application and Use:
Transmission and gear lubricant

Product Description:

A lubricating oil consisting of a mixture of saturated and unsaturated hydrocarbons derived from paraffinic distillate, and additives.

REGULATORY CLASSIFICATION

WHMIS:
Not a controlled product

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):
Not Regulated in Canada.

Please be aware that other regulations may apply.

TELEPHONE NUMBERS		MANUFACTURER/SUPPLIER:
Emergency 24 hr.	(519) 339-2145	IMPERIAL OIL
Technical Info.	(800) 268-3183	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 #

Not applicable

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: 15.80 cSt at 100 deg C
Vapour Density: not available
Boiling Point: 229 to 600 deg C
Evaporation rate: <0.1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: -24 deg C ASTM D97
Odour Threshold: not available
Vapour Pressure: <0.1 kPa at 20 deg C
Density: 0.89 g/cc at 15 deg C
Appearance/odour: Dark brown liquid, petroleum hydrocarbon odour.

4. HEALTH HAZARD INFORMATION

NATURE OF HAZARD

INHALATION:

Negligible hazard at normal temperatures (up to 38 deg C).
Elevated temperatures or mechanical action may form vapours, mists or fumes which may be irritating to the eyes, nose, throat and lungs.
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.

INGESTION:

Low toxicity.

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 > 3160 mg/kg	(Rabbit)
Inhalation	:	LC50 > 5000 mg/m3	(Rat)

OCCUPATIONAL EXPOSURE LIMIT:

ACGIH recommends:
For oil mists, 5 mg/m3.

Local regulated limits may vary.

5. FIRST AID MEASURES

INHALATION:

Vapour pressure of this material is low and as such inhalation under normal conditions is usually not a problem. If overexposed to oil mist, remove from further 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:

If swallowed, DO NOT induce vomiting. 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.