M S D S

Canadian Centre for Occupational Health and Safety
Issue : 97-1 (February, 1997)

*** IDENTIFICATION ***

MSDS RECORD NUMBER : 1314587
PRODUCT NAME(S) : TURBINE FUEL AVIATION, WIDE CUT TYPE
ESSO JET B
ESSO TURBO FUEL B
JET B
TURBO FUEL B
TURBO FUEL B F40
TURBO FUEL B JP4
PRODUCT IDENTIFICATION : MSDS Number : 000110
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 : 000110

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1. PRODUCT INFORMATION

Product Identifier: TURBINE FUEL AVIATION, WIDE CUT TYPE
ESSO JET B
ESSO TURBO FUEL B
JET B
TURBO FUEL B
TURBO FUEL B F40
TURBO FUEL B JP4

Application and Use:
Naphtha-kerosene blended aviation fuel for turbine-powered aircraft

Product Description:

A mixture of aliphatic and aromatic hydrocarbons and additives.

REGULATORY CLASSIFICATION

WHMIS:
Class B, Division 2: Flammable 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 3.1 Packing Group: II
PIN Number: UN1863 Guide Number: 120

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	40-70 V/V	8008-20-6	LD50:>5g/kg,oral,rat
Naphtha, full range	30-60 V/V	64741-42-0	
Ethylene Glycol Monomethyl Ether	0-0.15 V/V	109-86-4	LD50:2.4g/kg,orl,rat LD50:0.8g/kg,orl,rab
Diethylene Glycol Monomethyl Ether	0-0.15 V/V	111-77-3	LD50:9.2g/kg,orl,rat LD50:0.6g/kg,skn.rbt

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3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: no' vailable
Viscosity: 0.6 cSt at 40 deg C
Vapour Density: 4
Boiling Point: 40 to 243 deg C
Evaporation rate: <1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: -53 deg C less than
Odour Threshold: not available
Vapour Pressure: 21 kPa at 38 deg C
Density: 0.78 g/cc at 15 deg C
Appearance/odour: White or pale yellow liquid, petroleum odour

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. 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:

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

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:

May contain ethylene glycol monomethyl ether (EGME). Prolonged and/or repeated exposure through inhalation or extensive skin contact with EGME may result in toxic effects on the blood, the blood producing system, the kidneys, the male reproductive system and the embryo/fetus.
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.).
Contains diethylene glycol monomethyl ether (DIEGME). Prolonged and repeated exposure through inhalation or extensive skin contact with DIEGME may result in toxic effects on the kidneys, the reproductive system and/or the embryo/fetus.

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.
For Benzene (skin) 1) 5 ppm TWA for 8 hrs/day 2) 3 ppm TWA for 12 hrs/day 3) 250 ppm minutes for 5 to 30 minutes.

ACGIH recommends:
For n-Hexane, 50 ppm (180 mg/m3).
For Benzene, the ACGIH recommends a TLV of 10 ppm (30 mg/m3), and describes it as a substance of suspect carcinogenic potential in man.
For 2-Methoxyethanol, (skin) 5 ppm (16 mg/m3).

Local regulated limits may vary.

. 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.
Where prolonged and/or repeated skin and eye contact is likely to occur, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.
Where skin and eye contact is unlikely, but may occur as a result of short and/or periodic exposures, wear long sleeves and safety glasses with side shields.
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.
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.
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.
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 spi

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.

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7. FIRE AND EXPLOSION HAZARD

Flashpoint and method: -18 deg C COC D92

Autoignition: NA Flammable Limits: LEL: 0.6% UEL: 8.0%

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

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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

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9. NOTES

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10. PREPARATION

Date Prepared: May 18, 1995
Prepared by: LUBRICANTS AND SPECIALTIES
IMPERIAL OIL
Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(800) 268-3183

TRADE NAMES

Canadian Centre for Occupational Health and Safety

*** IDENTIFICATION ***

RECORD NUMBER	:	103065
LANGUAGE	:	ENGLISH
TRADE NAME(S)	:	DIESEL FUEL
PRODUCT IDENTIFICATION DATA	:	CHEMICAL CODE: 3727-3736, 3738, 3739, 3751-03 Trade Names: Diesel 20X, 0, 15, 20, 25, 30, 40, 40S, 50, 60 Diesel AA, Diesel GM 35, 45 Domestic Marine Diesel, Power Plus Diesel
DATE OF MSDS	:	1988-04-04

*** MANUFACTURER INFORMATION ***

MANUFACTURER	:	PETRO-CANADA INC
ADDRESS	:	POST OFFICE BOX 2844 PETRO-CANADA CENTRE CALGARY ALBERTA CANADA T2P 3E3 Telephone: 403-296-3000
EMERGENCY TELEPHONE NO.(S)	:	403-296-3000

DISCLAIMER:

NOTE FROM PETRO-CANADA: PETRO-CANADA INC AND ITS AFFILIATES ASSUME NO RESPONSIBILITY FOR INJURY TO ANYONE CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT ADHERED TO AS STIPULATED IN THE DATA SHEET. ADDITIONALLY, PETRO-CANADA INC AND ITS AFFILIATES ASSUME NO RESPONSIBILITY FOR INJURY TO ANYONE CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE SAFETY PROCEDURES ARE FOLLOWED. FURTHERMORE, VENDEE AND THIRD PERSONS ASSUME THE RISK IN THEIR USE OF THE MATERIAL.

*** MATERIAL SAFETY DATA ***

MATERIAL SAFETY DATA SHEET

WHMIS CLASSIFICATION

Combustible Liquid (Class B3)
Poisonous Material (Class D2)

CHEMICAL CODE: 3727-3736, 3738, 3739, 3751-03
DATE: April 4, 1988

SECTION I MATERIAL IDENTIFICATION

Trade Name:	DIESEL FUEL
Other Names:	Diesel 20X, 0, 15, 20, 25, 30, 40, 40S, 50, 60 Diesel AA, Diesel GM 35, 45 Domestic Marine Diesel, Power Plus Diesel
Chemical Synonyms and Family:	Petroleum hydrocarbon
Poison Control Centre Numbers:	Constul local telephone directory for emergency numbers.
plication:	Diesel Fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type.

SECTION II TRANSPORTATION (NR - Not Regulated by TDG)

UN Number: 1233
Primary Classification: NR
Subsidiary Classification: NR
Compatibility Groups: NR
CANUTEC Transport Emergency No.: (613) 996-6666

SECTION III COMPOSITION

COMPONENTS	% (VOL.)	CAS #
Complex mixture of petroleum hydrocarbons* (C9-C18)	>99.9	68334-30-5
ALLOWABLE LIMITS (8 Hr.)	5 mg/m3 (oil mist)**	
Anti-static additive, cetane improver, pour point depressant	<0.1	N/A
ALLOWABLE LIMITS (8 Hr.)	N/A	

* Aromatic content is 38% maximum (Benzene nil)
** Petro-Canada recommendation

SECTION IV PHYSICAL DATA

Density (at 15 deg C):	0.78-0.90 kg/L
Vapour Pressure (at 25 deg C):	1 kPA (approx.)
Vapour Density (at 20 deg C):	4.5 (approx.)
Solubility in Water:	Insoluable
Viscosity (Kinematic):	1.2-4.1 cSt (@ 40 deg C)
Boiling point/Range (at 1 atm):	145-371 deg C (approx.)
Percent Volatile (@ 20 deg C):	25% in 10 Hr. (approx.)
Evaporation Rate:	N/A
Pour Point:	-45 to -6 deg C (-50 to 20 deg F)
Appearance & Odour:	Clear to yellow, bright oily liquid with hydrocarbon odour.**

SECTION V FIRE & EXPLOSION DATA

Flash Point (method used = TCT):	40 deg C (minimum)
Flammable limits in air (% by volume):	Lower 0.7% Upper 6.0%
Auto-Ignition Temperature:	>225 deg C
Fire and Explosion Hazards:	Treat as combustible liquid.
Extinguishing media:	Foam, dry chemical, carbon dioxide for small fires, water spray. Do not cut, drill or weld empty containers.
Firefighting Procedures:	Use full protective equipment and self-contained breathing apparatus. Cover with extinguishing agent. Use water spray to cool fire-exposed containers and as a protective screen. Do not point solid water stream directly into burning product to avoid spreading fire.

MODERATE FIRE HAZARD

SECTION VI HEALTH HAZARD INFORMATION

Toxicity Data	*Estimated acute LD50 = 7650 mg/kg (rat, oral): practically non-toxic. Rabbit primary dermal irritation index (Draize) = 6.8 : extremely irritating. Rabbit eye irritation index (Draize) = 0: non-irritating.

Effects of Overexposure

Inhalation:	Inhalation of vapours or mist will cause headaches, nausea, dizziness, and intoxication; severe central nervous system depressant.
Skin and Eyes:	Irritation, defatting and drying of skin. Prolonged exposure to skin may cause chapping, cracking or possibly dermatitis. Eye contact may cause irritation, but not permanent damage.

* Based on API Study #79-6 on Diesel Fuel where LD50 = 9.0 ml/kg..
** May be dyed purple or red for taxation purposes.

Emergency and First Aid Procedures Information

Skin:	Remove contaminated clothing - launder before reuse. Soap and water wash. Discard saturated leather articles.
Eyes:	Copious warm water flush - 15 minutes. Physician assessment mandatory.
Inhalation:	Evacuate to fresh air. Apply Cardio Pulmonary Resuscitation if required. Administer oxygen if available. If resuscitation is required, physician assessment mandatory.
stion:	DO NOT INDUCE VOMITING. If vomiting - take care to prevent aspiration. Give 250 ml (1/2 pint) of milk. Mandatory physician assessment.
Notes to Physician	Gastric lavage should only be done after endotracheal intubation in view of the risk of aspiration which can cause serious chemical pneumonitis for which antibiotic and corticosteriod therapy may be indicated.

SECTION VII REACTIVITY DATA

Stability:	Stable under normal storage and use.
Conditions to avoid:	Excessive heat, sources of ignition, formation of oil mist.
Materials to avoid:	Strong oxidizing agents (strong acids, peroxides, chlorine, etc.).
Hazardous decomposition products:	COx, SOx, smoke on combustion.
Can hazardous polymerization occur?:	No.

SECTION VIII SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled:	Avoid contact. Use full protective equipment and breathing apparatus if required. ELIMINATE IGNITION SOURCES. Contain spill. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using electrically grounded explosion-proof pumps. Place absorbent in closed metal

	containers. DO NOT FLUSH TO SEWER.
Waste Disposal Method:	Incinerate at licenced waste reclaimer facility.

ECTION IX SPECIAL PROTECTION INFORMATION

Ventilation:	General ventilation. Use explosion-proof mechanical ventilation suitable for group D atmospheres.
Respiratory Protection:	Up to 5 mg/m3 (oil mist), none required. From 5 to 50 mg/m3, use an approved organic vapour respirator suitable for oil mist in areas with sufficient oxygen. Above 50 mg/m3, use full-fac air-supplied or self-contained breathing apparatus.
Protective Gloves:	NITRILE, VITON
Eye Protection:	Chemical goggles if splashing likely.
Other Protective Clothing:	Chemical resistant clothing if direct contact with liquid likely. DO NOT USE NATURAL RUBBER (PVC (polyvinyl chloride).

SECTION X SPECIAL PRECAUTIONS

Store in cool, well-ventilated area. Electrically ground/bond during pumping or transfer to avoid static accumulation. AVOID SKIN CONTACT AND INHALATION. Practice good personal hygiene. DO NOT SIPHON BY MOUTH OR USE AS A CLEANING SOLVENT. Launder work clothes frequently. Petro-Canada recommends an allowable exposure of 5 mg/m3 (oil mist) when handling DIESEL FUELS.

CTION XI REFERENCES

ACGIH, Threshold Limit Values and Biological Exposure Indices for 1987-88.
CONCAWE, First Aid Measures, Medical Toxicology Data and Professional Advice t Clinicians on Petroleum Products, February 1983.
API, Petroleum Process Stream Terms Included in the Chemical Substances Inventory Under the Toxic Substances Control Act (TSCA), 1983
Environment Canada Manual for Spills of Hazardous Materials, March, 1984.
NIOSH, The Industrial Environment - Its Evaluation and Control, 1973.
Patty's Industrial Hygiene and Toxicology, 3rd Edition, Vol. 2B, 1981.
API, The Toxicology of Petroleum Hydrocarbons, May, 1982.
API, Acute Toxicity Tests on Diesel Fuel, API #79-6, 1980.

Prepared by Health, Safety & Security
Cette fiche est aussi disponible en francais.

ISN: 103065

CANOX

MATERIAL SAFETY DATA SHEET

Canadian Oxygen Limited
The Corporate Centre
89 Queensway West
Mississauga Ontario L5B 2V2

PRODUCT INFORMATION

PRODUCT NAME: Propane

CHEMICAL FAMILY: Aliphatic Hydrocarbon

SYNONYMS: Liquified Petroleum Gas (LPG), Dimethyl Methane

TDG CLASSIFICATION: 2.1 UN 1075

CANOX 24 HR. TELEPHONE NO. 416-251-5241
CANUTEC TELEPHONE NO. 613-996-6666
EMERGENCY RESPONSE NO. 2-0101

HAZARDOUS INGREDIENTS

COMPONENT	FORMULA	CONCENTRATION	CAS #
Propane	C_3H_8	100%	74-98-6

PREPARATION INFORMATION

PREPARED BY: Gas Products Dept.

DATE PREPARED: January, 1989

PHONE NO.: (416) 273-7700

HEALTH HAZARD DATA

TIME WEIGHTED AVERAGE EXPOSURE LIMIT:

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

SYMPTOMS OF EXPOSURE:

Effects of exposure to high concentrations so as to displace the oxygen in the air necessary for life may include any, all or none of the following:

- Loss of balance or dizziness;
- Tightness in the frontal area of the forehead;
- Tingling of the tongue, fingertips or toes;
- Weakened speech leading to the inability to utter sounds;
- Rapid reduction in the ability to perform movements;
- Reduced consciousness of the surroundings;
- Loss of tactile sensations;
- Heightened mental activity.

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It should be recognized .at it is possible that none of e above symptoms may occur in asphyxia so that there are no definite warning symptoms.

Contact with rapidly evaporating liquid could cause frostbite or cryogenic "burns".

TOXICOLOGICAL PROPERTIES

Breathing high concentrations causes a narcotic effect; however, the major property is the exclusion of an adequate supply of oxygen to the lungs.

Frostbite effects are a change in colour of the skin to gray or white possibly followed by blistering.

FIRST AID

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

Dermal Contact or Frostbite: Remove contaminated clothing and flush affected areas with lukewarm water. DO NOT USE HOT WATER. A physician should see the patient promptly if the cryogenic "burn" has resulted in blistering of the dermal surface or deep tissue freezing.

PHYSICAL DATA

Boiling Point: $-42.1^{\circ}C$ ($-43.7^{\circ}F$)

Liquid Density @ Boiling Point: 582 kg/m^3 (36.3 lb/ft^3)

Vapor Pressure @ $21.1^{\circ}C$ ($70^{\circ}F$): 895 kPa (127 psia)

Specific Gravity @ $21.1^{\circ}C$ ($70^{\circ}F$) 1 atm (Air=1): 1.56

Solubility in Water: Negligible

Freezing Point: $-187.7^{\circ}C$ ($-305.8^{\circ}F$)

Appearance and Odour: Colourless, unpleasant gas (odour caused by odourant)

FIRE/EXPLOSION HAZARDS DATA

Flash Point (Method Used): $-104^{\circ}C$ ($-156^{\circ}F$) Closed cup

Auto Ignition Temperature: $480^{\circ}C$ ($896^{\circ}F$)

Flammability Limits: LEL: 2.2% UEL: 9.5%

Extinguishing Media: Water, carbon dioxide, dry chemical

Electrical Classification: Class 1, Group D

Special Fire Fighting Procedures: If possible, stop the flow of propane. Use water spray to cool surrounding containers.

Unusual Fire and Explosion Hazards: Propane is heavier than air and may travel a considerable distance to a source of ignition. Should flame be extinguished and flow of gas continue, increase ventiliation to prevent flammable mixture formation in low areas of pockets.

REACTIVITY DATA

Stability: Stable

Incompatibility (Material to Avoid): Oxidizers

Hazardous Decomposition Products: Carbon Monoxide

Hazardous Polymerization: Will not occur

Hazardous Mixtures of Other Liquids, Solids or Gases: Propane is flammable over a wide range in air.

PREVENTIVE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

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:

Ventilation: Hood with forced ventilation

Local Exhaust: To prevent accumulation above the LEL.

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

PERSONAL PROTECTIVE EQUIPMENT:

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

Protective Gloves: Plastic or rubber

Eye Protection: Safety goggles or glasses

Other Protective Equipment: Safety shoes, safety shower

SPECIAL PRECAUTIONS

Special Labelling Information:

TDG Shipping Name: Liquified Petroleum Gas (Propane)
TDG Classification: 2.1 UN 1075

Special Handling Recommendations:

Use only in well-ventilated areas. Valve protection caps must remain in place unless container is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to low pressure (<1720 kPa (250 psig)) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

For additional recommendations, consult Compressed Gas Association pamphlets P-1, P-14 and Safety Bulletin SB-2.

Special Storage Recommendations:

Protect cylinders from physical damage. Store in cool, dry well-ventilated area away from heavily trafficked areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 54°C (130°F). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time. Post "No Smoking or Open Flames" signs in the storage or use area. There should be no sources of ignition in the storage or use area.

For additional storage recommendations, consult Compressed Gas Association pamphlets P-1 and P-14 and Safety Bulletin SB-2.

Special Packaging Recommendations:

Propane is noncorrosive and may be used with any common structural material.

Other Recommendations or Precautions:

Earth-ground and bond all lines and equipment associated with propane system. Electrical equipment should be non-sparking or explosion proof. Compressed gas cylinders should not be refilled except by qualified producers of compressed gases. Shipment of a compressed gas cylinder which has not been filled by the owner or with his (written) consent is a violation of Federal Law.

MATERIAL SAFETY DATA SHEET

Date Prepared: October 23, 1991
Supersedes: July 22, 1991
MSDS Number: 223620

Cette fiche signalétique est aussi disponible en français

1. PRODUCT INFORMATION

Product Identifier: ESSOLUBE XD-3 EXTRA 20W-20

Application and Use:
Premium quality universal engine oil for use in severe service, heavy duty, diesel and gasoline engines

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

TRANSPORTATION OF DANGEROUS GOODS INFORMATION

Shipping Name: Petroleum Lubricating Oil
Class: Not applicable Packing Group:Not applicable
PIN Number: Not applicable Guide Number: 129

Please be aware that other regulations may apply.

TELEPHONE NUMBERS

Emergency 24 hr. (519) 339-2145
Technical Info. (416) 968-5114

MANUFACTURER/SUPPLIER:

Esso Petroleum Canada
55 St Clair Avenue West
Toronto, Ontario
M5W 2J8
(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 #

No regulated components

3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: not available
Viscosity: 8.40 cSt at 100 deg C
Vapour Density: not available
Boiling Point: 310 to 600 deg C
Evaporation rate: < 1 1= n-butylacetate
Solubility in water: negligible
Freezing/Pour Point: -27 deg C POUR
Odour Threshold: not available
Vapour Pressure: < 1 kPa at 38 deg C
Density: 0.89 g/cc at 15 deg C
Appearance/odour: Amber liquid, petroleum 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:

ow toxicity.
requent or prolonged contact may irritate the skin.

INGESTION:

Low toxicity.

CHRONIC:

Prolonged and/or repeated contact with used gasoline engine oil has caused 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 > 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.
Where prolonged and/or repeated skin and eye contact is likely to occur, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.
Where eye contact is unlikely, but may occur as a result of short and/or periodic exposures, wear safety glasses with side shields.
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.
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.
Recover by pumping or by using a suitable absorbant.
Consult an expert on disposal of recovered material. Ensure disposal in

Please turn over

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: 215 deg C CO D92

Autoignition: 330 deg C 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.
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 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

NA = not available

10. PREPARATION

Date Prepared : July 22, 1991
Prepared by: LUBRICANTS AND SPECIALTIES
ESSO PETROLEUM CANADA
55 St Clair Avenue West
Toronto, Ontario
M5W 2J8
(416) 968-5114

CAUTION

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 Esso Petroleum Canada customers and their employees and agents only. Any further distribution of this MSDS by Esso Petroleum Canada customers is prohibited without the written consent of Esso Petroleum Canada."

DEPARTMENT OF LABOR AND INDUSTRIES
INDUSTRIAL HYGIENE SECTION
POB 207
OLYMPIA, WA 98504
753-6497

MATERIAL SAFETY DATA SHEET

COMPLIES WITH WAC 296-62-05413

PREPARATION/REVISION DATE: January 8, 1991

SECTION I

MANUFACTURER'S NAME: PND CORPORATION

EMERGENCY TELEPHONE NO.: (206) 869-8650

ADDRESS (Number, Street, City, and ZIP Code): 1813 130th Avene N.E., Bellevue, Washington 98005

CHEMICAL NAME:

COMMON NAME: PLUG N' DIKE

CHEMICAL FAMILY: CLAY & POLYMER

FORMULA: N/A

SECTION II HAZARDOUS INGREDIENTS

CHEMICAL AND COMMON NAME	%	APPLICABLE EXPOSURE LIMITS		
		PEL-WISHA/OSHA	TLV-ACGIH	OTHER
NON-HAZARDOUS CHEMICALS	100			
Bentonite Blends (Hydrous Aluminum Silicates)	40-60%	N/A	N/A	N/A
Starch-g-poly(2-propenamide-co-2-propenoic acid, sodium salt)	<1	N/A	N/A	N/A
Water	40-50	N/A	N/A	N/A
onite (American Colloid Company) CAS NO. 1302-78-9				

CARCINOGENIC INGREDIENTS

CHEMICAL AND COMMON NAME	%	REFERENCE SOURCE		
		NTP	IARC	WISHA/OSHA
N/A				

SECTION III HEALTH HAZARD DATA

ACUTE HEALTH EFFECTS

None

CHRONIC HEALTH EFFECTS

None

ROUTES OF ENTRY

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None

Avoid brea hing dust. (Not applicable for paste) The Dust is not regulated

RGENCY AND FIRST AID PROCEDURES

None

Maintain good work/hygiene practices

If dust should come in contact with eyes flush with water

SECTION IV CHEMICAL DATA

BOILING POINT (°F)	N/A	SPECIFIC GRAVITY (H2O = 1)	N/A
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A

SOLUBILITY (Specify Solvents) N/A

PEARANCE AND ODOR

Grey powder or paste

SECTION V PHYSICAL HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
NONE	None		

F IISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

None

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

INCOMPATIBILITY (Materials to avoid)

None

HAZARDOUS DECOMPOSITION PRODUCTS

None

			CONDITIONS TO AVOID
HAZARDOUS POLYMERIZATION	MAY OCCUR		
	WILL NOT OCCUR	X	None
STABILITY	UNSTAB LE		
	STABLE	X	

SECTION VI SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

If not contaminated from a chemical spill or leak, pick up PLUG N' DIKE and dispose in solid waste landfill.

WASTE DISPOSAL METHOD

If used to control a chemical leak, dispose of contaminated PLUG N' DIKE according to procedures for the hazardous chemical it was in contact with, following all federal, state or province regulations for that waste.

SECTION VII EXPOSURE CONTROL INFORMATION

RESPIRATORY PROTECTION (Specify type)
None

ILATION	LOCAL EXHAUST N/A	SPECIAL None
	MECHANICAL (General) N/A	OTHER

PROTECTIVE GLOVES
N/A

EYE PROTECTION
None (optional use of goggles for dust)

OTHER PROTECTIVE EQUIPMENT
None

OTHER ENGINEERING CONTROLS
N/A

WORK PRACTICES
None

HYGIENIC PRACTICES
Maintain good work/hygiene practices

SECTION VIII SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
None - Premix must be stored above 32°F

MAINTENANCE PERSONNEL
N/A

PRECAUTIONS
None

POLY-DRILL DRILLING
1824 - 104 AVENUE, S.W.
CALGARY, ALBERTA, CANADA T2W 0A8
TEL. (403) 259-5112 FAX (403) 255-7185

EMERGENCY (403) 259-5112

I. PRODUCT IDENTIFICATION

Trade Name(s): 1330/133X
WHMIS CLASSIFICATION: Non regulated
TDG Classification: Non dangerous goods
Manufacturer: Poly-Drill Drilling

II. PHYSICAL DATA

Boiling Point: Not available
Solubility in Water: Solubility limited by solution viscosity
Density(g/ml): 1.08 at 25 C
Appearance and Odor: Blue. Odor slight.

Specific Gravity(@ 25 Deg.C): 1.09
pH: 8.1 (1% concentration)
Physical state: Liquid

III. FIRE AND EXPLOSION DATA

Flash Point (Method used): (PMCC) >100 C
Conditions of flammability: Intense heat, open flame.
Hazardous combustion products: Products of incomplete hydrocarbon combustion.
Upper and Lower flammable limits: Not available.
Extinguishing media: Use foam, dry chemical, CO2.

IV. REACTIVITY

Chemical stability: Stable under normal conditions
Hazardous Polymerization: Will not occur
Incompatible substances: Avoid strong oxidizers(e.g. chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) may generate heat, fires, explosions and toxic vapors.
Hazardous decomposition products: Carbon monoxide, carbon dioxide, and products of incomplete hydrocarbon combustion.

V. HEALTH HAZARD DATA

Routes of Exposure and Effects:

SKIN: Slight irritant. Prolonged contact may cause skin irritation or dermatitis in some individuals.
EYE: Slight to moderate transient eye irritation.
INHALATION: Not a likely route of exposure. High vapor concentrations may cause dizziness or nausea.
INGESTION: can cause nausea, vomiting, cramps, diarrhea.

Exposure limits: TLV-TWA: Mineral oil, mist 5 mg/m3
Carcinogenicity: None of the components of this product are listed as carcinogens by IARC and ACGIH.
Sensitization of product: Not suspected to be a sensitizer.
Teratogenicity: Not available
Mutagenicity: Not available

VI. EMERGENCY AND FIRST AID PROCEDURES

SKIN: Wash exposed area with soap and water. If irritation or abnormalities persist, call a physician.
EYE: Immediately flush eyes with water for 15 minutes, if irritation or abnormalities persist, call a physician.
INHALATION: Remove to fresh air. If breathing is difficult, give oxygen and call a physician.
INGESTION: Do not induce vomiting. Call a physician immediately.

VII. HANDLING AND USE PRECAUTIONS

Storage requirements: Keep container closed when not in use. Store in a cool dry location away from oxidizing and reducing agents.
Waste Disposal: Product should be disposed of in accordance with applicable local, Provincial, and Federal regulations.
Steps must be taken is product is released or spilled. Clean spill areas thoroughly to avoid hazardous slippery conditions.

VII. INDUSTRIAL HYGIENE CONTROL MEASURES

Respiratory Protection: None normally required.
Ventilation: If mist and/or vapors are present, use air-purifying respirator of self-contained breathing apparatus, but rarely required.
Eye Protection: Safety glasses if personally preferred.
Gloves: Generally not necessary. Personal preference.

DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping Name: Drilling Mud
Hazard Class: Not hazardous
Hazardous Substances: None
Cautionary Labeling: None required.

M S D S

Canadian Centre for Occupational Health and Safety
Issue : 97-1 (February, 1997)

*** IDENTIFICATION ***

MSDS RECORD NUMBER : 1322365
PRODUCT NAME(S) : Calcium Chloride
PRODUCT IDENTIFICATION : PRODUCT CODE: 93515
DATE OF MSDS : 1996-11-14

*** MANUFACTURER INFORMATION ***

MANUFACTURER : CHAMPION TECHNOLOGIES, LTD
ADDRESS : 6555 - 30th Street South East
Calgary Alberta
Canada T2C 1R4
EMERGENCY TELEPHONE NO. : 403-279-2835
613-996-6666 (CANUTEC)

*** SUPPLIER/DISTRIBUTOR INFORMATION ***

SUPPLIER/DISTRIBUTOR : CHAMPION TECHNOLOGIES, LTD
ADDRESS : 6555 - 30th Street South East
Calgary Alberta
Canada T2C 1R4
EMERGENCY TELEPHONE NO. : 403-279-2835 613-996-6666 (CANUTEC)

*** MATERIAL SAFETY DATA ***

MATERIAL SAFETY DATA SHEET
Calcium Chloride

SECTION 1 - IDENTIFICATION

CHAMPION TECHNOLOGIES, LTD.
6555 - 30th Street S.E.
Calgary, Alberta T2C 1R4
Trade Name: Calcium Chloride
Chemical Family: Salt
Product Use: Industrial
Printed: 11/14/96

IBM 93515
EMERGENCY TELEPHONE NUMBERS
1-403-279-2835
1-613-996-6666 (CANUTEC)

Prepared by: J.Bursey

SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY

hazardous Components	CAS No.	Wt.%	LD50	LC50
CALCIUM CHLORIDE	10043-52-4	60-100	NA	NA

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Physical State:	solid	Vapor Point, C:	ND
Boiling Point, C:	204	Vapor Pressure:	NA
Freezing Point, C:	NA	Vapor Density:	ND
pH:	NA	Specific Gravity (H20=1):	2.2
Coeff. Water/Oil Dist.:	ND	Evaporation Rate:	ND

Odour Threshold (ppm): ND (butyl acetate=1)
Odour and Appearance: White to off white pepple

SECTION 4 - FIRE & EXPLOSION DATA

Flash Point, C & Method: NA PMCC | Flammable Limits: LEL,% NA UEL,% NA | Based on: NA
Autoignition Temp C: ND
Hazardous Combustion Products: Smoke, CO, CO2, & vapors
Explosion Data: ND
Sensitivity to Static Discharge: ND

FIRE HAZARDS:
Flammable material may be ignited by heat, sparks, or flames. Vapours may travel to a source of ignition and flashback. Containers may explode in heat or fire.Vapour exploration hazard indoors, outdoors or in sewers. Run off to sewer may creat fire or explosion hazard.

EXTINGUISHING MEDIA:
Dry chemical, co2, water spray or regular foam. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after the fire is out. Stay away from ends of containers.

Abbreviations: NA=not available, NAP=not applicable, ND=not determined.

Calcium Chloride

SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)

Chemical Stability: STABLE
Conditions To Avoid: NA
Incompatible Materials: Strong oxidizers
Hazardous Decomposition: Oxides of carbon and nitrogen

SECTION 6 - HEALTH HAZARDS

PRIMARY ROUTES OF ENTRY
Inhalation: X Absorption: X Ingestion: X Injection: NA

HEALTH HAZARDS:
Contact may irritate or burn skin and eyes. Fire may produce irritating gases. Runoff from fire control or dilution water may cause pollution.

EMERGENCY & FIRST AID PROCEDURES:
Move victim to fresh air and call emergency medical care. If not breathing give artificial respiration. If breathing is difficult, give oxygen under supervision.
In case of eye contact, immediately flush with running water for at least 15 minutes. In case of skin contact, wash with soap and water. In case of ingestion, call a physician.
Do not induce vomiting.

Carcinogenicity? ND

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Stop leak if you can do it without risk. Take up with sand or other noncombustible absorbent material and place in containers for later disposal.

HANDLING PROCEDURES AND EQUIPMENT:

Handle carefully, avoid smoking, drinking, or eating on use. Wear adequate protective clothes. ndle and open container t h care. In case of accident or if you feel ill, seek medical advice.

Calcium Chloride

STORAGE REQUIREMENTS:
Store in well ventilated area, away from all sources of ignition. Keep away from children. Do not store near foodstuffs. Store in a duly identified container. Observe local regulations.

ATTENTION:
Do not cut, puncture or weld on or near this container.

WASTE DISPOSAL METHOD:
Contact all municipal, provincial and federal regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

Respiratory Protection (Specify Type):
NONE REQUIRED UNDER NORMAL CONDITIONS.
Ventilation: Local Exhaust: Recommended General Exhaust: Recommended
Special: NA
Protective Gloves: Chemically Resistant / Non-Slip
Eye Protection: Chemical Safety Goggles / Safety Glasses
Other Protective Clothing or Equipment: Coveralls, Splash Aprons, Eye Wash, and Safety Shower

Work/Hygenic Practices:
Clean up Spills Promptly, Wash Contaminated Clothing.

SECTION 9 - SHIPPING DATA

Hazard Classification:	UN/NA No.:	Labels Required:
NOT-REGULATED	NONE	NONE

Proper Shipping Name/Description:
SHIPPING DESCRIPTION:
None (CALCIUM CHLORIDE)

pH:	Flash Point, C:	Pkg. Group:
NA	NA	NONE

This information is based on data believed by Champion Technologies, Ltd. to be accurate, but no warranty, express or implied is made.