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LUBRICATING OIL; PETROLEUM OIL

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\* M S D S \*

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\* Canadian Centre for Occupational Health and Safety \*

\* \* \* \* \* Issue : 2001-1 (February, 2001) \*

\*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 2313142

PRODUCT NAME(S) : TRANSCAL-N

LUBRICATING OIL; PETROLEUM OIL

PRODUCT IDENTIFICATION : MSDS No. 0135104 US/ENGLISH

CAS NUMBER: 64742-65-0

DATE OF MSDS : 1999-12-09

CURRENCY NOTE : This MSDS was provided to CCOHS in

electronic form on 2000-05-31

\*\*\* MANUFACTURER INFORMATION \*\*\*

MANUFACTURER : BP Marine America's

ADDRESS : Post Office Box 4518

Houston Texas

U.S.A. 77210-4518

Telephone: 630-434-6377 (OTHER PRODUCT

SAFETY INFORMATION, USA)

EMERGENCY TELEPHONE NO. : 800-447-8735 (HEALTH INFORMATION)

613-996-6666 (SPILL INFORMATION, CANUTEC,

Canada)

\*\*\* MATERIAL SAFETY DATA \*\*\*

MSDS No. 0135104 US/ENGLISH

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SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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MANUFACTURER/SUPPLIER:	EMERGENCY HEALTH INFORMATION:
BP Marine America's	1 (800) 447-8735
PO Box 4518	
Houston, TX 77210-4518 U.S.A.	EMERGENCY SPILL INFORMATION:
	1 (800) 424-9300 CHEMTREC (USA)
	OTHER PRODUCT SAFETY INFORMATION:
	1 (630) 434-6377 (USA)

SUBSTANCE: TRANSCAL-N

TRADE NAMES/SYNONYMS: LUBRICATING OIL; PETROLEUM OIL

CREATION DATE: Dec 09 1999

REVISION DATE: Dec 21 1999

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**LUBRICATING OIL; PETROLEUM OIL**

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**SECTION 2            COMPOSITION, INFORMATION ON INGREDIENTS**

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COMPONENT: SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE  
CAS NUMBER: 64742-65-0  
EC NUMBER (EINECS): 265-169-7  
PERCENTAGE: <100

COMPONENT: HYDROTREATED HEAVY PARAFFINIC DISTILLATE  
CAS NUMBER: 64742-54-7  
EC NUMBER (EINECS): 265-157-1  
PERCENTAGE: <100

(See Section 8, "Exposure Controls, Personal Protection", for exposure guidelines)

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**SECTION 3            HAZARDS IDENTIFICATION**

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NFPA RATINGS (SCALE 0-4): HEALTH=1 FIRE=1 REACTIVITY=0

**EMERGENCY OVERVIEW:**

COLOR: yellow  
PHYSICAL FORM: liquid  
ODOR: hydrocarbon odor  
MAJOR HEALTH HAZARDS: Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.

**POTENTIAL HEALTH EFFECTS:**

INHALATION:  
No significant health hazards identified.  
SKIN CONTACT:  
Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Heated material can cause thermal burns.  
EYE CONTACT:  
No significant health hazards identified.  
INGESTION:  
Ingestion causes gastrointestinal irritation and diarrhea.

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**SECTION 4            FIRST AID MEASURES**

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INHALATION: If adverse effects occur, remove to uncontaminated area. Get medical attention.

SKIN CONTACT: Wash exposed skin with soap and water. Remove contaminated clothing and thoroughly clean and dry before reuse. Get medical attention if irritation develops.

EYE CONTACT: Flush eyes with plenty of water.

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INGESTION: If swallowed, drink plenty of water. Get immediate medical attention. Induce vomiting only at the instructions of a physician. Do not give anything by mouth to unconscious or convulsive person.

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### SECTION 5 FIRE FIGHTING MEASURES

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FIRE AND EXPLOSION HAZARDS: Slight fire hazard.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, regular foam, water

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Water or foam may cause frothing.

FIRE FIGHTING PROTECTIVE EQUIPMENT: Firefighters should wear full bunker gear, including a positive pressure self contained breathing apparatus.

FLASH POINT: 410 F (210 C)

FLAMMABILITY CLASSIFICATION: Not Flammable.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition products or combustion: hydrocarbons, oxides of carbon

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### SECTION 6 ACCIDENTAL RELEASE MEASURES

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Stop leak if possible without personal risk. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Cover with plastic sheet or tarp to minimize spreading and protect from contact with water. Prevent spreading by diking, ditching, or absorbing on inert materials.

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### SECTION 7 HANDLING AND STORAGE

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STORAGE: Store and handle in accordance with all current regulations and standards. Do not store in unlabeled containers. Keep away from heat, sparks and flame. Store in a cool, dry place. Store in a well-ventilated area. Keep container tightly closed. Keep separated from incompatible substances.

HANDLING: Keep away from all ignition sources. Use only with adequate ventilation. Do not eat, drink or smoke in areas of use or storage. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Remove contaminated clothing and thoroughly clean and dry before reuse. Wash thoroughly after work using soap and water.

SPECIAL PRECAUTIONS: Empty containers may contain toxic,

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## LUBRICATING OIL; PETROLEUM OIL

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flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

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### SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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#### EXPOSURE LIMITS:

SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE:

MINERAL OIL MIST:

5 mg/m3 OSHA TWA

5 mg/m3 ACGIH TWA (Notice of Intended Changes 1993-1994)

10 mg/m3 ACGIH STEL (Notice of Intended Changes 1993-1994)

5 mg/m3 MEXICO TWA

10 mg/m3 MEXICO STEL

HYDROTREATED HEAVY PARAFFINIC DISTILLATE:

MINERAL OIL MIST:

5 mg/m3 OSHA TWA

5 mg/m3 ACGIH TWA (Notice of Intended Changes 1993-1994)

10 mg/m3 ACGIH STEL (Notice of Intended Changes 1993-1994)

5 mg/m3 MEXICO TWA

10 mg/m3 MEXICO STEL

VENTILATION: Use with adequate ventilation. Control airborne concentrations below the exposure guidelines.

EYE PROTECTION: None required; however, use of eye protection is good industrial practice.

CLOTHING: Avoid repeated or prolonged contact. Wear protective clothing if prolonged or repeated contact is likely.

GLOVES: Wear protective gloves if prolonged or repeated contact is likely.

RESPIRATOR: Use with adequate ventilation.

Avoid breathing vapor or mist.

If ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and P95 particulate filter.

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### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL STATE: liquid

APPEARANCE: clear

COLOR: yellow

ODOR: hydrocarbon odor

BOILING POINT: 649 F (343 C)

FREEZING POINT: Not available

POUR POINT: 10.0 F (-12.2 C)

VAPOR PRESSURE: <0.1 mmHg @ 38 C

VAPOR DENSITY (air=1): >1

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SPECIFIC GRAVITY (water=1): 0.873  
WATER SOLUBILITY: almost insoluble  
PH: Not available  
VOLATILITY: negligible  
ODOR THRESHOLD: Not available  
EVAPORATION RATE: very slow, water=1  
VISCOSITY: 150-160 SUS @ 38 C  
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

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**SECTION 10      STABILITY AND REACTIVITY**

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

INCOMPATIBILITIES: strong oxidizing materials

HAZARDOUS DECOMPOSITION:

Thermal decomposition products or combustion: hydrocarbons, oxides of carbon

POLYMERIZATION: Will not polymerize.

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**SECTION 11      TOXICOLOGICAL INFORMATION**

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EYE IRRITATION: Testing not conducted. See Other Toxicity Data.

SKIN IRRITATION: Testing not conducted. See Other Toxicity Data.

DERMAL LD50: Testing not conducted. See Other Toxicity Data.

ORAL LD50: Testing not conducted. See Other Toxicity Data.

INHALATION LC50: Testing not conducted. See Other Toxicity Data.

OTHER TOXICITY DATA:

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program, the U.S. Occupational Safety and Health Act, or the International Agency for Research on Cancer (IARC).

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**SECTION 12      ECOLOGICAL INFORMATION**

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Ecological testing has not been conducted on this product by BP Amoco.

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**SECTION 13      DISPOSAL CONSIDERATIONS**

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Dispose in accordance with all applicable regulations.

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**SECTION 14      TRANSPORT INFORMATION**

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U.S. DEPARTMENT OF TRANSPORTATION: Not regulated.

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: Not regulated.

LAND TRANSPORT ADR/RID: Not regulated.

AIR TRANSPORT IATA/ICAO: Not regulated.

MARITIME TRANSPORT IMDG: Not regulated.

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**SECTION 15      REGULATORY INFORMATION**

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CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR Part 302.4): This product is not reportable under 40 CFR Part 302.4.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR Part 355): This product is not regulated under Section 302 of SARA and 40 CFR Part 355.

SARA TITLE III SECTION 311/312 HAZARDOUS CATEGORIZATION (40 CFR Part 370):

ACUTE: N  
CHRONIC: N  
FIRE: N

REACTIVE: N  
SUDDEN RELEASE: N

SARA TITLE III SECTION 313 (40 CFR Part 372): This product is not regulated under Section 313 of SARA and 40 CFR Part 372.

STATE REGULATIONS:

California Proposition 65: N

TSCA INVENTORY STATUS: Listed on inventory.

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OSHA HAZARD COMMUNICATION STANDARD: Contains a component listed by ACGIH.  
Contains a component listed by OSHA.

EC INVENTORY (EINECS/ELINCS): In compliance.

JAPAN INVENTORY (MITI): Not determined.

AUSTRALIA INVENTORY (AICS): Not determined.

KOREA INVENTORY (ECL): Not determined.

CANADA INVENTORY (DSL): Listed on inventory.

PHILIPPINE INVENTORY (PICCS): Not determined.

CHINA INVENTORY (IECS): Not determined.

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**SECTION 16      OTHER INFORMATION**

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Prepared by: Product Stewardship and Toxicology

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This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1.  
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practice

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MIBC (METHYL ISOBUTYL CARBINOL)

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\* Canadian Centre for Occupational Health and Safety \*

\* \* \* \* \* Issue : 2001-1 (February, 2001) \*

\*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 2427908

PRODUCT NAME(S) : METHYL ISOBUTYL CARBINOL

DATE OF MSDS : 2000-02-02

CURRENCY NOTE : This MSDS was provided to CCOHS in  
electronic form on 2000-09-27

\*\*\* SUPPLIER/DISTRIBUTOR INFORMATION \*\*\*

SUPPLIER/DISTRIBUTOR : CANADA COLORS AND CHEMICALS LIMITED

ADDRESS : 80 Scarsdale Road  
Don Mills Ontario  
Canada M3B 2R7  
Telephone: 416-449-7750

EMERGENCY TELEPHONE NO. : 416-444-2112

SUPPLIER/DISTRIBUTOR NOTE :  
For further information about this product please contact the Canada  
Colors Customer Service Department at 416-449-7750.

\*\*\* MATERIAL SAFETY DATA \*\*\*

MATERIAL SAFETY DATA SHEET : 00000545

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CANADA COLORS AND CHEMICALS LI  
80 SCARSDALE ROAD  
DON MILLS, ONTARIO M3B 2R7  
(416) 449-7750

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Product: METHYL ISOBUTYL CARBINOL

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SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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MANUFACTURER..... CANADA COLORS & CHEMICALS LTD.  
80 SCARSDALE ROAD,  
DON MILLS, ON

M3B 2R7

PRODUCT NAME.....

PRODUCT CODE.....

CHEMICAL FORMULA..... C6H14O.

MOLECULAR WEIGHT..... N.AV.

CHEMICAL FAMILY..... ORGANIC.

MATERIAL USE..... SOLVENT.

EMERGENCY PHONE NO..... (416)-444-2112.



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SECTION 02: COMPOSITION/INFORMATION ON INGREDIENTS

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%	CAS / TLV	LD/50, ROUTE, SPECIES	LC/50, ROUTE, SPECIES
METHYL ISOBUTYL CARBINOL			
100	108-11-2	>2590 MG/KG	>2000 PPM/8H
	25 PPM SKIN		

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SECTION 03: HAZARDS IDENTIFICATION

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ROUTE OF ENTRY:.....	
SKIN CONTACT.....	BRIEF CONTACT MAY CAUSE SLIGHT IRRITATION WITH ITCHING AND LOCAL REDNESS. PROLONGED OR REPEATED CONTACT MAY CAUSE DEFATTING AND DRYING OF THE SKIN.
SKIN ABSORPTION.....	PROLONGED OR WIDESPREAD CONTACT MAY RESULT IN THE ABSORPTION OF POTENTIALLY HARMFUL AMOUNTS OF MATERIAL.
EYE CONTACT.....	EXCESS REDNESS AND SWELLING OF THE CONJUNCTIVA MAY OCCUR.CAUSES IRRITATION, EXPERIENCED AS STINGING AND DISCOMFORT OR PAIN.CORNEAL INJURY MAY OCCUR.
INHALATION.....	HIGH CONCENTRATIONS OF VAPOUR MAY CAUSE IRRITATION OF THE RESPIRATORY TRACT, EXPERIENCED AS NASAL DISCOMFORT AND DISCHARGE, WITH CHEST PAIN AND COUGHING. HIGH VAPOUR CONCENTRATIONS MAY CAUSE DROWSINESS AND HEADACHE.
INGESTION.....	MODERATELY TOXIC.HEADACHE, DIZZINESS, DROWSINESS, NAUSEA, VOMITING MAY OCCUR.
EFFECTS OF ACUTE EXPOSURE.....	SEE ABOVE.
EFFECTS OF CHRONIC EXPOSURE.....	NO ADVERSE EFFECTS ANTICIPATED FROM AVAILABLE INFORMATION.
MEDICAL CONDITIONS AGGRAVATED.....	SKIN CONTACT MAY AGGRAVATE AN EXISTING
BY OVEREXPOSURE	DERMATITIS.

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SECTION 04: FIRST AID MEASURES

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INSTRUCTIONS:.....	EYE CONTACT:. FLUSH EYES WITH LARGE AMOUNTS OF RUNNING WATER FOR AT LEAST 15 MINUTES. HOLD EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYE AND LIDS WITH WATER.REMOVE ANY CONTACT LENSES.GET IMMEDIATE MEDICAL ATTENTION.IN CASE OF SKIN CONTACT.START RINSING AND REMOVE CONTAMINATED CLOTHING WHILE RINSING.WASH SKIN WITH SOAP AND WATER.WASH CLOTHING BEFORE REUSE.IF IRRITATION PERSISTS, GET MEDICAL ATTENTION.IN CASE OF
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INGESTION, GIVE LARGE QUANTITIES OF WATER IF CONSCIOUS. INDUCE VOMITING. THIS SHOULD BE DONE ONLY BY MEDICAL OR EXPERIENCED FIRST-AID PERSONEL. GET IMMEDIATE MEDICAL ATTENTION. IF INHALED, REMOVE FROM AREA TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION OR ADMINISTER OXYGEN, IF NECESSARY. OXYGEN MAY BE GIVEN BY QUALIFIED PERSONNEL. SEEK MEDICAL ATTENTION.

NOTES TO PHYSICIAN:..... THERE IS NO SPECIFIC ANTIDOTE. TREATMENT SHOULD BE DIRECTED AT THE CONTROL OF SYMPTOMS AND THE CLINICAL CONDITION OF THE PATIENT.

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**SECTION 05: FIRE FIGHTING MEASURES**

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T.D.G. FLAM. CLASS..... 3.  
FLAMMABILITY..... YES.  
IF YES, UNDER WHICH.....  
CONDITIONS?  
EXTINGUISHING MEDIA..... USE WATER SPRAY (FOG), ALCOHOL-TYPE OR ALL-PURPOSE-TYPE FOAM BY MANUFACTURERS' RECOMMENDED TECHNIQUES FOR LARGE FIRES. USE CARBON DIOXIDE OR DRY CHEMICAL FOR SMALL FIRES.  
SPECIAL PROCEDURES..... FLAMMABLE. WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.  
FLASH POINT (C), METHOD..... 39 (C). (T.C.C.). ASTM D 56. 41. (T.O.C.). ASTM D 1310.  
AUTO IGNITION TEMPERATURE..... N.AV.  
UPPER FLAMMABLE LIMIT (% BY..... 5.5.  
VOL.)  
LOWER FLAMMABLE LIMIT (% BY..... 1.0.  
VOL.)  
EXPLOSION DATA.....  
EXPLOSIVE POWER..... N.AV.  
RATE OF BURNING..... N.AV.  
UNUSUAL FIRE AND EXPLOSION..... THIS MATERIAL MAY PRODUCE A FLOATING FIRE HAZARDS  
HAZARDS  
HAZARDOUS COMBUSTION PRODUCTS..... BURNING CAN PRODUCE, . CARBON DIOXIDE, CARBON MONOXIDE. CARBON MONOXIDE IS HIGHLY TOXIC IF INHALED; CARBON DIOXIDE IN SUFFICIENT CONCENTRATIONS CAN ACT AS AN ASPHYXIAN.

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SECTION 06: ACCIDENTAL RELEASE MEASURES

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LEAK/SPILL..... SMALL SPILLS CAN BE FLUSHED WITH LARGE  
QUANTITIES OF WATER.LARGE SPILLS SHOULD BE  
COLLECTED FOR DISPOSAL.AVOID CONTACT WITH  
LIQUID AND VAPOURS.WEAR PROTECTIVE  
EQUIPMENT.THIS PRODUCT MAY BE TOXIC TO  
FISH. AVOID DISCHARGE TO NATURAL WATERS.

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SECTION 07: HANDLING AND STORAGE

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HANDLING PROCEDURES AND..... AVOID CONTACT WITH EYES.AVOID  
EQUIPMENT INGESTION.AVOID INHALING.WEAR PROTECTIVE  
EQUIPMENT DURING HANDLING.KEEP AWAY FROM  
HEAT AND FLAMES.VAPOURS MAY ACCUMULATE AND  
TRAVEL TO DISTANT IGNITION SOURCES AND  
FLASHBACK.KEEP CONTAINER CLOSED.EMPTY  
CONTAINERS ARE HAZARDOUS, MAY CONTAIN  
FLAMMABLE/EXPLOSIVE DUSTS, LIQUID RESIDUE  
OR VAPOURS.FOLLOW LABELED WARNINGS EVEN  
AFTER CONTAINER IS EMPTIED.USE ADEQUATE  
VENTILATION.WASH THOROUGHLY AFTER  
HANDLING.MAINTAIN A GOOD PERSONAL HYGIENE.  
STORAGE NEEDS..... STORE IN A COOL, DRY, WELL VENTILATED  
AREA, AWAY FROM HEAT AND IGNITION SOURCES.

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SECTION 08: EXPOSURE CONTROLS/PERSONAL PROTECTION

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EXPOSURE GUIDELINES:..... COMPONENT:. METHYL ISOBUTYL CARBINOL:. 104  
MG/M3 TWA8 ACGIH. 25 PPM TWA8 ACGIH. 167  
MG/M3 STEL ACGIH. 40 PPM STEL ACGIH.  
GLOVES/ TYPE..... IMPERVIOUS GLOVES (NEOPRENE).  
RESPIRATORY/TYPE..... USE SELF CONTAINED BREATHING APPARATUS IN  
HIGH VAPOUR CONCENTRATIONS.  
EYE/TYPE..... MONOGOGGLES. OR. FACE SHIELD.  
FOOTWEAR/TYPE..... NO SPECIAL REQUIREMENTS.  
CLOTHING/TYPE..... WEAR IMPERVIOUS PROTECTIVE CLOTHING.  
CHEMICAL APRON.  
OTHER/TYPE..... EYE BATH AND SAFETY SHOWER.  
ENGINEERING CONTROLS..... GENERAL (MECHANICAL) ROOM VENTILATION IS

EXPECTED TO BE SATISFACTORY WHERE THIS

PRODUCT IS STORED AND HANDLED IN CLOSED  
EQUIPMENT.SPECIAL, LOCAL VENTILATION IS  
NEEDED AT POINTS WHERE VAPOURS CAN BE  
EXPECTED TO ESCAPE TO THE WORKPLACE  
AIR.PROCESS HAZARD:. SUDDEN RELEASE OF HOT  
ORGANIC CHEMICAL VAPORS OR MISTS FROM  
PROCESS EQUIPMENT OPERATING AT ELEVATED

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TEMPERATURE AND PRESSURE, OR SUDDEN  
INGRESS OF AIR INTO HOT EQUIPMENT UNDER A  
VACUUM, MAY RESULT IN IGNITIONS WITHOUT  
THE PRESENCE OF OBVIOUS IGNITION  
SOURCES. PUBLISHED "AUTOIGNITION" OR  
"IGNITION" TEMPERATURE VALUES CANNOT BE  
TREATED AS SAFE OPERATING TEMPERATURES IN  
CHEMICAL PROCESSES WITHOUT ANALYSIS OF THE  
ACTUAL PROCESS CONDITIONS. ANY USE OF THIS  
PRODUCT IN ELEVATED-TEMPERATURE PROCESS  
SHOULD BE THOROUGHLY EVALUATED TO  
ESTABLISH AND MAINTAIN SAFE OPERATING  
CONDITIONS.

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**SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES**

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PHYSICAL STATE.....	LIQUID. TRANSPARENT COLOURLESS.
ODOUR.....	MILD NONRESIDUAL.
ODOUR THRESHOLD.....	N.AV.
VAPOUR PRESSURE (MMHG).....	0.49 KPA. 3.7 MMHG.
VAPOUR DENSITY (AIR=1).....	3.5.
EVAPORATION RATE.....	0.43.
BOILING POINT.....	131.7 (C).
FREEZING POINT.....	-90.
PH.....	N.AV.
SPECIFIC GRAVITY (WATER=1).....	0.8075.
SOLUBILITY IN WATER (% W/W).....	1.7. AT 20 (C).
MOLECULAR WEIGHT.....	102.18 G/MOL.
VOLATILE.....	100%.
COEFFICIENT OF WATER/OIL DIST.....	N.AV.

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**SECTION 10: STABILITY AND REACTIVITY**

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CHEMICAL STABILITY:.....	
YES.....	YES.
NO, WHICH CONDITIONS?.....	
COMPATIBILITY WITH OTHER.....	
SUBSTANCES:	
YES.....	
NO, WHICH ONES?.....	STRONG ACIDS. STRONG ALKALIES.
REACTIVITY CONDITIONS?.....	AVOID EXCESSIVE HEAT, OPEN FLAMES AND ALL IGNITION SOURCES.
HAZARDOUS PRODUCTS OF.....	CARBON MONOXIDE AND CARBON DIOXIDE ARE
DECOMPOSITION	PRODUCED ON COMBUSTION.
HAZARDOUS POLYMERIZATION.....	WILL NOT OCCUR.

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**MIBC (METHYL ISOBUTYL CARBINOL)**

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**SECTION 11: TOXICOLOGICAL INFORMATION**

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EXPOSURE LIMIT OF MATERIAL..... SEE SECTION 02.  
LC 50 OF MATERIAL, SPECIES &..... SEE SECTION 02.  
ROUTE  
LD 50 OF MATERIAL, SPECIES &..... COMPONENT: METHYLISOBUTYL CARBINOL. 2590  
ROUTE MG/KG. (RAT). 3560 ML/KG. (RABBIT).  
CARCINOGENICITY OF MATERIAL..... NONE.  
REPRODUCTIVE EFFECTS..... NONE.  
IRRITANCY OF MATERIAL..... SEE SECTION 03.  
SENSITIZING CAPABILITY OF..... NONE.  
MATERIAL  
SYNERGISTIC MATERIALS..... NONE.

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**SECTION 12: ECOLOGICAL CONSIDERATIONS**

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ENVIRONMENTAL TOXICITY..... AT VERY LOW CONCENTRATION IN WATER, THIS  
INFORMATION PRODUCT IS BIODEGRADABLE IN A BIOLOGICAL  
WASTEWATER TREATMENT PLANT. THIS PRODUCT  
MAY BE TOXIC TO FISH. AVOID DISCHARGE TO  
NATURAL WATERS.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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WASTE DISPOSAL..... INCINERATE IN A FURNACE IN RESPECT TO  
PROVINCIAL, FEDERAL AND MUNICIPAL  
REGULATIONS.

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**SECTION 14: TRANSPORT INFORMATION**

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UN NUMBER..... 2053.  
TDG CLASSIFICATION..... 3.  
PACKING GROUP..... III.  
SPECIAL SHIPPING INSTRUCTIONS..... NOT REGULATED IF <454 L.

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**SECTION 15: REGULATORY INFORMATION**

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WHMIS CLASSIFICATION..... B3. D2B.  
CPR COMPLIANCE..... THIS PRODUCT HAS BEEN CLASSIFIED IN  
ACCORDANCE WITH THE HAZARD CRITERIA OF THE  
CPR AND THE MSDS CONTAINS ALL THE  
INFORMATION REQUIRED BY THE CPR.

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MIBC (METHYL ISOBUTYL CARBINOL)

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SECTION 16: OTHER INFORMATION

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N.AV.=NOT AVAILABLE.....

N.AP.=NOT APPLICABLE.....

PREPARED BY..... Regulatory Affairs

DATED..... 02022000

# MOTOR OIL

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 \* M S D S \*  
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 \* Canadian Centre for Occupational Health and Safety \*  
 \* \* \* \* \* Issue : 2001-1 (February, 2001) \*

## \*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 2006368  
 PRODUCT NAME(S) : MOTOR OIL - ALL GRADES  
 PRODUCT IDENTIFICATION : MSDS NUMBER 3700A  
 DATE OF MSDS : 1998-06-10  
 CURRENCY NOTE : This MSDS was provided to CCOHS in  
 electronic form on 1999-02-01

## \*\*\* MANUFACTURER INFORMATION \*\*\*

MANUFACTURER : PRODUITS LUBRI-DELTA INC  
 ADDRESS : 2215 boulevard Industriel  
 Chomedey Laval Quebec  
 Canada H7S 1P8  
 Telephone: 450-629-4555 514-383-2784  
 Fax: 514-383-4241  
 EMERGENCY TELEPHONE NO. : 613-996-6666 (CANUTEC)

## \*\*\* MATERIAL SAFETY DATA \*\*\*

PRODUITS LUBRI-DELTA INC.  
 2215, boulevard Industriel  
 Chomedey, Laval QC H7S 1P8

(450) 629-4555 (514) 383-2784 FAX (514) 383-4241

## MATERIAL SAFETY DATA SHEET

### PREPARATION INFORMATION

PERSON IN CHARGE	LAURENT MILLETTE
TELEPHONE NUMBER	(450) 629-4555
REVISED ON	June 10, 1998
MSDS NUMBER	3700A

MATERIAL IDENTIFICATION	MOTOR OIL - ALL GRADES
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EMERGENCY CANADIAN CENTER	CANUTEC
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(613) 996-6666

## THIS PRODUCT IS NOT REGULATED BY W.H.M.I.S.

DANGEROUS GOODS	none
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TRANSPORT CLASSIFICATIONS	none
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## MOTOR OIL

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### PHYSICAL DATA

APPEARANCE & ODOUR	liquid with characteristic odour
ODOUR LIMIT (ppm)	100
VAPOUR PRESSURE (mmHg 20 deg C)	>1
EVAPORATION RATE (butyl acetate = 1)	<1
pH	-----
DENSITY	0.86 to 0.92
VAPOUR DENSITY (air = 1)	>1
BOILING POINT deg C	170 to 350
FREEZING POINT deg C	-40 to 0
SOLUBILITY IN WATER/OIL	insoluble in water

### FIRE & EXPLOSION DATA

INFLAMMABILITY CONDITIONS	none
EXTINGUISHING MEDIA	dry chemical products, foam, waterspray
FLASH POINT (open vase)	minimum 190 deg C
UPPER FLAMMABLE LIMIT %/VOLUME	not available
LOWER FLAMMABLE LIMIT %/VOLUME	not available
AUTO IGNITION TEMPERATURE	>220 deg C
DANGEROUS COMBUSTION PRODUCTS	thermal decomposition may produce carbon oxyde, nitrogen,
SHOCK EXPLOSIBILITY	phosphorous
ELECTRO-STATICS	none
	none

### REACTIVITY

INSTABILITY CONDITIONS	stable
MATERIAL TO AVOID	all oxidizing and comburant products
CONDITIONS TO AVOID	high temperature
HAZARDOUS DECOMPOSITION PRODUCTS	carbon oxyde, nitrogen, phosphorous, sulfur

### HEALTH HAZARD INFORMATION

SKIN CONTACT	prolonged or repeated contact
can cause dermatitis	
SKIN ABSORPTION	very low toxicity
EYE CONTACT	mild to severe irritation if not washed off rapidly
INHALATION	not considered as a risk at room temperature, low toxicity
ACUTE EXPOSITION EFFECTS	nothing serious
EXPOSITION LIMIT (ppm)	moderate, 8 hours (5 mg/m3)
IRRITATING PROPERTY	no
SENSIBILITY TO PRODUCT	none
CANCEROGENICITY	none
TOXIC EFFECTS ON REPRODUCTION	none
TERATOGENICITY	no
MUTAGENICITY	no
SYNERGETIC TOXICOLOGIC PRODUCTS	none



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MOTOR OIL

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PREVENTIVE MEASURES

PERSONAL MATERIAL TO USE	rubber gloves
SPECIAL TECHNIQUES TO USE	none
STEPS TO BE TAKEN IF MATERIAL IS RECASED	absorb with porous and
chemically inert products	
OR SPILLED	
ELIMINATION OF RESIDUALS	according to local rules
METHODS AND EQUIPMENTS FOR MAINTENANCE	normal uses and security
measures to observe	
SHIPPING INSTRUCTIONS	none

EMERGENCY AND FIRST-AID PROCEDURES

EYES	copious water flush - 15 minutes
SKIN	soap and water flush
INHALATION	not applicable
INGESTION	DO NOT INDUCE VOMITING, call a physician
EMERGENCY	QUEBEC ANTI-POISON CENTER AT 1-800-463-
5060	

The informations contained in this document are given as a guide for the product maintenance and were written in good faith by competent technical personnel. These informations should not be considered as complete because other aspects of maintenance and uses could be observed. In no case, Produits Lubri-Delta Inc. could be held responsible for damages, losses and injuries resulting of the use of this product and no warranty whatsoever, tacit or express is awarded by Produits Lubri-Delta Inc. This material safety data sheet is in effect for three (3) years.

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NITROGEN

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\* M S D S \*

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\* Canadian Centre for Occupational Health and Safety \*

\* \* \* \* \* Issue : 2001-1 (February, 2001) \*

\*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 950152

PRODUCT NAME(S) : Nitrogen

PRODUCT IDENTIFICATION : CAS No.: 7727-37-9

Form No. F-85313-4

DATE OF MSDS : 1992-10-01

\*\*\* MANUFACTURER INFORMATION \*\*\*

MANUFACTURER : ANSUL INCORPORATED

ADDRESS : One Stanton Street

Marinette Wisconsin

U.S.A. 54143-2542

Telephone: 715-735-7411 (Other

Information Calls)

EMERGENCY TELEPHONE NO. : 800-424-9300 (CHEMTREC)

\*\*\* MATERIAL SAFETY DATA \*\*\*

MATERIAL SAFETY DATA SHEET

NITROGEN

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QUICK IDENTIFIER (In Plant Common Name)

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Prepared By: Safety and Health Department

Date Prepared: October 1, 1992

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SECTION 1 - IDENTITY

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Common Name: (used on label) Nitrogen

(Trade Name and Synonyms)

CAS No.: 7727-37-9

Chemical Nitrogen Chemical Gas

Name: Family:

Formula: N2

NITROGEN

SECTION 2 - INGREDIENTS

PART A - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	%	CAS No.
Nitrogen	100	7727-37-9
ACGIH TLV: N/A		
Acute Toxicity Data: NDA		

PART B - OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	%	CAS No.
None	N/A	N/A
Acute Toxicity Data: N/A		

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS

(Fire and Explosion Data)

Boiling Point: - 195.8 deg C  
Specific Gravity (H2O=1): N/A  
Vapor Pressure (mm Hg): N/A  
Percent Volatile by Volume (%): 100  
Vapor Density (Air = 1): 0.98  
Evaporation Rate ( = 1): N/A - Gas at room temperature.  
Solubility in Water: Slight  
Reactivity in Water: Slight-forms H2CO3  
Appearance and Odor: Colorless gas, with no odor.

Flash Point: None  
Flammable Limits in Air % by Volume: N/A  
Extinguisher Media: N/A  
Auto-Ignition Temperature: N/A  
Special Fire Fighting Procedures: Though gas cylinders are equipped with pressure and temperature relief devices, they should be removed from high temperatures or fire to avoid risk of rupture.  
Unusual Fire and Explosion Hazards: None

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**NITROGEN**

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**SECTION 4 - PHYSICAL HAZARDS**

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Stability:        Unstable [ ]        Conditions        N/A  
                     Stable [X]        to Avoid:

Incompatibility        Can react violently with Li, Nd, Ti under proper  
(Materials to Avoid):        conditions.

Hazardous                None  
Decomposition Products:

Hazardous                May Occur [ ]        Conditions        N/A  
Polymerization: Will Not Occur [X]        to Avoid:

NOTE: As used in Ansul extinguishers or cylinders, N2 is a gas compressed under pressure up to 2400 psi at 70 deg F.

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**SECTION 5 - HEALTH HAZARDS**

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Threshold                None Listed  
Limit Value:

Routes of Entry:

Eye Contact:	Avoid contact with liquefied form of N2. Can produce chilling sensations and discomfort, also frostbite.
Skin Contact:	Evaporation of liquid from the skin can produce chilling sensations. Frostbite can occur. Avoid N2 liquid.
Inhalation:	In high concentrations, it is a simple asphyxiant - dizziness, shortness of breath, unconsciousness, or suffocation may occur.
Ingestion:	Ingestion is not likely to occur since this material is gas at room temperature.

Signs and Symptoms:

Acute Overexposure:	Dizziness, headaches, tinnitus, difficulty breathing, drowsiness, depending on length of exposure and concentrations.
Chronic Overexposure:	Compressed air illness.

Medical Conditions Generally        None known.  
Aggravated by Exposure:

Chemical Listed as Carcinogen or Potential:

National Toxicology	Yes [ ]	I.A.R.C.	Yes [ ]	OSHA:	Yes [ ]
Program:	No [X]	Monographs:	No [X]		No [X]

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## NITROGEN

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### SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

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Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding lids open. If redness, itching or a burning sensation develops, get Medical attention. Treat for frostbite if necessary.

Skin Contact: Wash the material off the skin with copious amounts of soap and water for at least 15 minutes. If redness, itching, or burning sensation develops, get Medical attention. Treat for frostbite if necessary.

Inhalation: Remove victim to fresh air. If cough or other respiratory symptoms occur, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult Medical personnel.

Ingestion: Ingestion is not likely to occur since this material is gas at room temperature.

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### SECTION 7 - SPECIAL PROTECTION INFORMATION

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Respiratory Protection (Specify Type): Not normally necessary if controls are adequate. If exposure is prolonged, a self-contained breathing apparatus is recommended.

Ventilation:	Local Exhaust:	Mechanical (General):
	Recommended in confined spaces.	Recommended
Protective Clothing or Equipment:	For contact with liquid.	Eye Protection:
Gloves:		Chemical goggles recommended when handling liquid. Full faceshield in addition if splashing is possible.

Other Protective Clothing or Equipment: Protective clothing for contact with liquid.

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### SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

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Precautions to be Taken in Handling and Storage: Store containers in a clean, dry well-ventilated area, away from heat above 125 deg F. Store as a compressed gas in DOT approved vessels. If cylinder is not attached to a system, it must be safety capped to protect against violent vessel movement or force of escaping gas if valve is actuated or seal is accidentally punctured.

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**NITROGEN**

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Other Precautions: Note incompatibility information in Section 4.

Steps to be Taken in Case Material is Released or Spilled: Ventilate to outside.

Waste Disposal Methods: Dispose of in compliance with local, state, and federal regulations.

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**HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS**

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HAZARD INDEX:

4 Severe Hazard	0 HEALTH
3 Serious Hazard	0 FLAMMABILITY
2 Moderate Hazard	0 REACTIVITY
1 Slight Hazard	
0 Minimal Hazard	

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N/A = Not Applicable      NDA = No Data Available

ANSUL is a registered trademark.  
Form No. F-85313-4

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OXYGEN

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\* M S D S \*

\* Canadian Centre for Occupational Health and Safety \*

\* \* \* \* \* Issue : 2001-1 (February, 2001) \*

\*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 76352

PRODUCT NAME(S) : Oxygen

CURRENCY NOTE : MSDS Confirmed Current: 1999-02-24

\*\*\* MANUFACTURER INFORMATION \*\*\*

MANUFACTURER : Airco Specialty Gases

ADDRESS : 575 Mountain Avenue

Murray Hill New Jersey

U.S.A. 07974

Telephone: 201-464-8100

\*\*\* SUPPLIER/DISTRIBUTOR INFORMATION \*\*\*

SUPPLIER/DISTRIBUTOR : Applied Research Products

ADDRESS : Post Office Box 277 Cartierville

Montreal Quebec

Canada H4K 2J6

\*\*\* MATERIAL SAFETY DATA \*\*\*

MATERIAL SAFETY DATA SHEET

Product Name: Oxygen

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(Chemical name is underlined)

Synonyms: None

CAS Number: 7782-44-7

DOT Hazard Class: Nonflammable gas

Chemical Formula: O2

DOT Identification Number: UN 1072

Chemical Family: Oxidizer

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## OXYGEN

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### Health Hazard Data

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TWA: None established (ACGIH, 1984-85). Oxygen is the "vital element" in the atmosphere in which we live and breathe (approximately 21 molar % of the atmosphere.)

#### Symptoms of Exposure:

Breathing high concentrations (greater than 75 molar percent) causes symptoms of hyperoxia which include cramps, nausea, dizziness, hypothermia, amblyopia, respiratory difficulties, bradycardia, fainting spells and convulsions capable of leading to death. For additional information on hyperoxia, see Compressed Gas Association's Pamphlet P-14.

#### Toxicological Properties:

The property is that of hyperoxia which leads to pneumonia. Concentrations between 25 and 75 molar percent present a risk of inflammation of organic matter in the body.

#### Recommended First Aid Treatment:

PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO OXYGEN. RESCUE PERSONNEL SHOULD BE COGNIZANT OF EXTREME FIRE HAZARD ASSOCIATED WITH OXYGEN-RICH ATMOSPHERES.

Conscious persons should be assisted to an uncontaminated area and breathe fresh air. They should be kept warm and quiet. The physician should be informed that the victim is experiencing (has experienced) hyperoxia.

Unconscious persons should be moved to an uncontaminated area and given assisted respiration. When breathing has been restored, treatment should be as above. Continued treatment should be symptomatic and supportive.

#### Hazardous Mixtures of Other Liquids, Solids, or Gases:

Oxygen vigorously accelerates combustion. Contact with all flammable materials should be avoided. Some materials which are not flammable in air will burn in pure oxygen or oxygen-enriched atmospheres.

### Physical Data

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Boiling Point: -297.3 deg F (-182.9 deg C)

Liquid Density @ Boiling Point: 71.23 lb/ft<sup>3</sup> (1141 kg/m<sup>3</sup>)

Vapor Pressure @ 70 deg F (21.1 deg C): Above the critical temperatures of  
-181.1 deg F (118.4 deg C)

Specific Gravity @ 70 deg F, 1 atm (Air=1): 1.11

Solubility in Water: Slightly

Freezing Point: -361.8 deg F (-218.8 deg C)

Appearance and Odor: Colorless, odorless gas



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## OXYGEN

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### Fire and Explosion Hazard Data

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Flash Point (Method Used): N/A

Auto Ignition Temperature: N/A

LEL: N/A

UEL: N/A

Extinguishing Media: Copious quantities of water for fires with oxygen as the oxidizer.

Electrical Classification: Nonhazardous

Special Fire Fighting Procedures: If possible, stop the flow of oxygen which is supporting the fire.

Unusual Fire and Explosion Hazards: Vigorously accelerates combustion.

### Reactivity Data

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Stable

Conditions to Avoid:

Incompatibility (Materials to Avoid): All flammable materials

Hazardous Decomposition Products: None

Hazardous Polymerization:  
Will not occur

Conditions to Avoid:

### Spill or Leak Procedures

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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 CHEMTREC for emergency assistance or your closest Airco location.

Waste Disposal Method:

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

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## OXYGEN

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### Special Protection Information

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Respiratory Protection: N/A

Ventilation: To prevent accumulation above 25 molar percent.

Local Exhaust: To prevent accumulation above 25 molar percent.

Special:

Mechanical (Gen.):

Other:

Protective Gloves: As required; any material

Eye Protection: Safety goggles or glasses

Other Protective Equipment: Safety shoes, safety shower

### Special Precautions

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#### Special Labeling Information:

DOT Shipping Name: Oxygen or  
Oxygen, compressed

DOT Hazard Class: Nonflammable gas

DOT Shipping Label: Oxidizer

I.D. No.: UN1072

#### Special Handling Recommendations:

Use only in well-ventilated areas. Valve protection caps and valve outlet threaded plugs 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 lower pressure (< 3000 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 handling recommendations, consult Compressed Gas Association's Pamphlets P-1, P-14 and G-4.

#### Special Storage Recommendations:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavily trafficked areas and emergency exits and away from full or empty stored cylinders which contain flammable products. Do not allow the temperature where cylinders are stored to exceed 130F (54C). 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.

For additional storage recommendations, consult Compressed Gas Association's Pamphlets P-1, P-14 and G-4.

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## OXYGEN

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### Special Packaging Recommendations:

Carbon steels and low alloy steels are acceptable for use at lower pressures. For high pressure applications use stainless steels, copper and its alloys, nickel and its alloys, brass, bronze, silicon alloys, Monel(R), Inconel(R) or beryllium. Lead and silver or lead and tin alloys are good gasketing materials. Teflon(R) and Kel-F(R) are the preferred nonmetal gaskets.

Special Note: It should be recognized that the ignition temperature of metals and nonmetals in pure oxygen service decreases with increasing oxygen pressure.

### Other Recommendations or Precautions:

Oxygen should not be used as a substitute for compressed air in pneumatic equipment since this type generally contains flammable lubricants. Equipment to contain oxygen must be "cleaned for oxygen service". See Compressed Gas Association Pamphlet G-4.1. 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 (49CFR).

ISN: 76352

# PAX

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 \* \* \* \* \* M S D S \* \* \* \* \*  
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 \* Canadian Centre for Occupational Health and Safety \*  
 \* \* \* \* \* Issue : 2001-1 (February, 2001) \*

## \*\*\* IDENTIFICATION \*\*\*

MSDS RECORD NUMBER : 2495764  
 PRODUCT NAME(S) : Pax 18  
 PRODUCT IDENTIFICATION : Code LA3238  
 DATE OF MSDS : 1999-07-09  
 CURRENCY NOTE : This MSDS was provided to CCOHS in  
 electronic form on 2000-12-20

## \*\*\* SUPPLIER/DISTRIBUTOR INFORMATION \*\*\*

SUPPLIER/DISTRIBUTOR : VAN WATERS & ROGERS LTD  
 ADDRESS : 9800 Van Horne Way  
 Richmond British Columbia  
 Canada V6X 1W5  
 EMERGENCY TELEPHONE NO. : 800-424-9300 (CHEMTREC)

## \*\*\* MATERIAL SAFETY DATA \*\*\*

VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B C. V6X 1W5

WHMIS CODES: E

For Emergency Assistance  
 Involving Chemicals Call CHEMTREC  
 (800) 424-9300

WHMIS (Classification)  
 CLASS E: Corrosive liquid.

## \*\*Section I. Chemical Product Identification\*\*

Product Name	Pax 18	Code	LA3238
		CAS#	Mixture.
Synonym	Pax-11, Pax-14, Pax-19, Pax-10.	DSL	On the DSL list.
Chemical Name	Not applicable.	CI#	Not available.
Chemical Family	Not available.		
Chemical Formula	Not applicable.		
Material Uses	Not available.		

PAX

**\*\*Section II. Composition and Information on Ingredients\*\***

Name	CAS #	% by Weight	LC50/LD50
Aluminum chlorohydrate	1327-41-9	<50	ORAL (LD50): Acute: 12780 mg/kg [Rat].
Water	7732-18-5	<50	ORAL (LD50): Acute: 99999 mg/kg [Rat.]. Chronic: 99999 mg/kg [Rat.]. DERMAL (LD50): Acute: 99999 mg/kg [Rat.]. Chronic: 99999 mg/kg [Rat.]. GAS (LC50): Acute: 99999 ppm 4 hour(s) [Rat.]. Chronic: 99999 ppm 4 hour(s) [Rat.]. VAPOR (LC50): Acute: 99999 ppm 4 hour(s) [Rat.]. Chronic: 99999 ppm 4 hour(s) [Rat.]. DUST (LC50): Acute: 73659.8 mg/m3 4 hour(s) [Rat.]. Chronic: 73659.8 mg/m3 4 hour(s) [Rat.].

**\*\*Section III. Hazards Identification\*\***

Potential Acute Health Effects: Extremely hazardous in case of ingestion. Very hazardous in case of skin contact (irritant), of eye contact (irritant, corrosive). Hazardous in case of inhalation. Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

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PAX

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**\*\*Section IV. First Aid Measures\*\***

Eye Contact	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. COLD water may be used. DO NOT use an eye ointment. Seek medical attention.
Skin Contact	If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. COLD water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.
Hazardous Skin Contact	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
Inhalation	Allow the victim to rest in a well ventilated area. Seek immediate medical attention.
Hazardous Inhalation	Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.
Ingestion	DO NOT induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.
Hazardous Ingestion	Not available.

**\*\*Section V. Fire and Explosion Data\*\***

The Product is: May be combustible at high temperature.

Auto-Ignition Temperature Not available.

Flash Points Not available.

Flammable LimitsNot available.

Products of Combustion Not available.