MOTOR OIL

M S D S

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
EMERGENCY CANADIAN CENTER	CANUTEC (613) 996-6666

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

DANGEROUS GOODS	**none**
TRANSPORT CLASSIFICATIONS	**none**

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, phosphorous
SHOCK EXPLOSIBILITY	none
ELECTRO-STATICS	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

PREVENTIVE MEASURES

PERSONAL MATERIAL TO USE	rubber gloves
SPECIAL TECHNIQUES TO USE	none
STEPS TO BE TAKEN IF MATERIAL IS RECASED OR SPILLED	absorb with porus and chemically inert products
ELIMINATION OF RESIDUALS	according to local rules
METHODS AND EQUIPMENTS FOR MANUTENTION	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 manutention and were written in good faith by competent technical personnel. These informations should not be considered as complete because other aspects of manutention and uses could be observed. In no case, Produits Lubri-Delta Inc. could be held responsible for damages, losts 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.

NITROGEN

* *
* M S D S *
* *
* 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

QUICK IDENTIFIER (In Plant Common Name)

Prepared By: Safety and Health Department
Date Prepared: October 1, 1992

SECTION 1 - IDENTITY

Common Name: (used on label) Nitrogen
(Trade Name and Synonyms)
CAS No.: 7727-37-9
Chemical Name: Nitrogen
Chemical Family: Gas
Formula: N2

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

SECTION 4 - PHYSICAL HAZARDS

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

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

Hazardous Decomposition Products: None

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

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

SECTION 5 - HEALTH HAZARDS

Threshold Limit Value: None Listed

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 Aggravated by Exposure: None known.

Chemical Listed as Carcinogen or Potential:

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

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

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.

SECTION 7 - SPECIAL PROTECTION INFORMATION

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: Recommended in confined spaces.	Mechanical (General): Recommended	
Protective Gloves:	For contact with liquid.	Eye Protection:	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.		

SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

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.

NITROGEN

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.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS

HAZARD INDEX:

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

N/A = Not Applicable NDA = No Data Available

Form No. F-85313-4

OXYGEN

* *
* 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
(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

OXYGEN

Health Hazard Data

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 and 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

Boiling Point: -297.3 deg F (-182.9 deg C)
Liquid Density @ Boiling Point: 71.23 lb/ft3 (1141 kg/m3)
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

Fire and Explosion Hazard Data

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

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

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.

Special Protection Information

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

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.

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

M S D S

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.		

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.

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 Limits	Not available.
Products of Combustion	Not available.

Fire Hazards in Presence of Various Substances	Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of oxidizing materials, of reducing materials, of combustible materials.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section VI. Accidental Release Measures

Small Spill	Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill	Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate.

Section VII. Handling and Storage

Precautions	Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. DO NOT ingest. Do not breathe gas, fumes, vapor or spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as alkalis.

Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Corrosive materials should be stored in a separate safety storage cabinet or room.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection	Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Pungent chlorine.
Taste	Not available.		
Molecular Weight	Not applicable.		
pH (1% soln/water)	0.5 [Acidic.]	Color	Clear Amber.
Boiling Point	100 C (212 F)		
Melting Point	-20 C (-4 F)		
Critical Temperature	Not available.		
Specific Gravity	1.2 (Water = 1)		
Vapor Pressure	The highest known value is 17.2 mm of Hg (@ 20 C) (Water).		
Vapor Density	The highest known value is 1 (Air = 1) (Water).		
Volatility	Not available.		

Odor Threshold	Not available.
Evaporation rate	Not available.
Viscosity	Not available.
Water/Oil Dist. Coeff.	The product is much more soluble in water.
Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water, methanol.
Solubility	Easily soluble in cold water, hot water, methanol. Insoluble in diethyl ether, n-octanol.

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Contact with Aluminum and Zinc may release hydrogen gas.
Incompatibility with various substances	Reactive with alkalis. Non-reactive with organic materials, metals.
Corrosivity	Not considered to be corrosive for metals and glass according to our database.
Special Remarks on Reactivity	Hazardous Decomposition Products: May include toxic fumes of chlorine and aluminum compounds.
Special Remarks on Corrosivity	Not available.
Hazardous Polymerization	No.

Section XI. Toxicological Information

Routes of Entry	Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 25818 mg/kg (Rat) (Calculated value for the mixture).

Chronic Effects on Humans	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.
Other Toxic Effects on Humans	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.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause redness, defatting and dermatitis of the exposed area. Repeated or prolonged contact may result in conjunctivitis.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section XII. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks	Not available.