

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name NF-2000 AEROSOL
Recommended Use Lubricant cleaning agent
Information on Manufacturer
 CERTIFIED LABS, DIV. OF NCH CORP.
 BOX 152170
 IRVING, TEXAS 75015

Product Code 5606
Chemical Nature Halogenated hydrocarbon
Emergency Telephone Number
 CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
 Danger
 Harmful if inhaled
 Severe skin irritation
 Severe eye irritation
 Harmful or fatal if swallowed

Color Colorless **Physical State** Liquid **Odor** Ether-like
Potential Health Effects
Principle Route of Exposure Skin contact, Eye contact, Inhalation, Ingestion.
Primary Routes of Entry Skin Absorption, Inhalation, Ingestion.
Acute Effects
Eyes Severe eye irritant. May cause irreversible eye damage.
Skin Severe skin irritant. The product may be absorbed through the skin.
Inhalation Irritating to mucous membranes. Inhalation may cause central nervous system effects. May cause drowsiness and dizziness. Irregular cardiac activity.
Ingestion Irritating to mucous membranes. Causes headache, drowsiness or other effects to the central nervous system. Smallest quantities reaching the lungs through swallowing or subsequent vomiting may result in lung edema or pneumonia .
Chronic Effects Possible risks of irreversible effects. Liver injury may occur.
Target Organ Effects Skin, Eyes, Liver, Kidney, Respiratory system, Central nervous system, Cardiovascular system.
Aggravated Medical Conditions Respiratory disorders. Skin disorders.
Potential Environmental Effects No information available.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Carbon Dioxide	124-38-9
Tetrachloroethylene	127-18-4
Carbon tetrachloride	56-23-5
Methylene chloride	75-09-2
Propylene oxide	75-56-9

The product contains no substances which at their given concentration, are considered to be hazardous to health

4. FIRST AID MEASURES

General Advice Show this safety data sheet to the doctor in attendance.
Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
Notes to Physician Aspiration hazard if swallowed - can enter lungs and cause damage.

5. FIRE-FIGHTING MEASURES

Flash Point > 200°F / > 93°C **Method** Seta closed cup
Autoignition Temperature No information available
Flammability Limits in Air Mixture **Upper** 23 **Lower** 13
Suitable Extinguishing Media Carbon dioxide (CO2). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Alcohol-resistant foam . Water spray.
Specific Hazards Arising from the Chemical Solvent vapors are heavier than air and may spread along floors . Vapors may travel to areas away from work site before igniting/flashing back to vapor source. . Flame extension: 0 inches / 0 cm and Burnback: 0 inches / 0 cm

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	Health	2	Flammability	1	Instability	0
HMSIS	Health	2	Flammability	1	Instability	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Prevent further leakage or spillage if safe to do so.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment No information available
Methods for Cleaning Up Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a

container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling Storage	Keep away from open flames, hot surfaces and sources of ignition.			
	Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not freeze. Keep out of the reach of children.			
Storage Temperature	Minimum	35°F / 2°C	Maximum	120°F / 49°C
Storage Conditions	Indoor	X	Outdoor	
			Heated	
				Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Carbon Dioxide	TWA: 5000 ppm STEL: 30000 ppm	TWA: 5000 ppm TWA: 9000 mg/m ³	IDLH: 40000 ppm STEL 54000 mg/m ³ STEL 30000 ppm TWA: 9000 mg/m ³ TWA: 5000 ppm
Tetrachloroethylene	TWA: 25 ppm STEL: 100 ppm	TWA: 100 ppm Ceiling: 200 ppm	IDLH: 150 ppm
Carbon tetrachloride	TWA: 5 ppm Skin STEL: 10 ppm	TWA: 10 ppm Ceiling: 25 ppm	IDLH: 200 ppm STEL 2 ppm STEL 12.6 mg/m ³
Methylene chloride	TWA: 50 ppm	no data available	IDLH: 2300 ppm
Propylene oxide	TWA: 2 ppm	TWA: 100 ppm TWA: 240 mg/m ³	IDLH: 400 ppm

Engineering Measures

Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection

Tightly fitting safety goggles.

Skin Protection

Impervious gloves.

Respiratory Protection

Use NIOSH approved respiratory protection.

General Hygiene Considerations

Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	Viscosity	Non viscous
Color	Colorless	Odor	Ether-like
Appearance	Transparent	pH	Not applicable
Specific Gravity	1.06	Bulk Density	No data available
Evaporation Rate	95.2 (Butyl acetate=1)	Percent Volatile (Volume)	100
VOC Content (%)	0	Vapor Pressure	524.12 mmHg @ 70 °F
Vapor Density	0.6	Solubility	Negligible
Boiling Point/Range	154°F / 68°C		

10. STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions. Hazardous polymerization does not occur .

Conditions to Avoid

Heat, flames, and sparks.

Incompatible Products

Strong oxidizing agents. Reducing agents. Water. Amines. Alkali metals. Alkaline earth metals.

Hazardous Decomposition Products

Carbon oxides. Chlorine gas.. Hydrogen chloride gas. Phosgene.

Possibility of Hazardous Reactions

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The product itself has not been tested

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Carbon Dioxide	no data available	no data available	no data available	no data available	no data available
Tetrachloroethylene	2629 mg/kg (Rat)	no data available	no data available	no data available	no data available
Carbon tetrachloride	2350 mg/kg (Rat)	20 g/kg (Rabbit)	8000 ppm (Rat) 4 h	no data available	no data available
Methylene chloride	1410 mg/kg (Rat)	2000 mg/kg (Rat)	no data available	no data available	no data available
Propylene oxide	380 mg/kg (Rat)	1244 mg/kg (Rabbit)	4000 ppm (Rat) 4 h 9.486 mg/L (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Carbon Dioxide	no data available	no data available	no data available	no data available	respiratory system, CVS
Tetrachloroethylene	no data available	no data available	no data available	no data available	liver, kidneys, eyes, CNS, respiratory system, skin (in animals: liver tumors)
Carbon tetrachloride	no data available	no data available	no data available	no data available	CNS, eyes, lungs, liver, kidneys, skin (in animals: liver cancer)
Methylene chloride	X	Cardiovascular	X	Female reproductive toxin.	skin, CVS, eyes, CNS (in animals: lung, liver, salivary and mammary gland tumors)
Propylene oxide	no data available	no data available	no data available	no data available	eyes, skin, respiratory system (in animals: nasal tumors)

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Carbon Dioxide	not applicable	not applicable	not applicable	not applicable	not applicable
Tetrachloroethylene	A3	Group 2A	Reasonably Anticipated	X	not applicable
Carbon tetrachloride	A2	Group 2B	Reasonably Anticipated	X	not applicable
Methylene chloride	A3	Group 2B	Reasonably Anticipated	X	not applicable
Propylene oxide	A3	Group 2B	Reasonably Anticipated	X	not applicable

12. ECOLOGICAL INFORMATION

Product Information

The product itself has not been tested

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Carbon Dioxide	no data available	no data available	no data available	no data available	N/A
Tetrachloroethylene	EC50> 816 mg/L Selenastrum capricornutum 96 h	LC50= 12.9 mg/L Lepomis macrochirus 96 h LC50= 13.4 mg/L Pimephales promelas 96 h LC50= 4.99 mg/L Oncorhynchus mykiss 96 h LC50= 5.28 mg/L Oncorhynchus mykiss 96 h	EC50 = 100 mg/L 24 h EC50 = 112 mg/L 24 h EC50 = 120.0 mg/L 30 min	EC50 = 7.49 mg/L 48 h	2.53 - 2.88
Carbon tetrachloride	EC50= 830 mg/L Tetrahymena pyriformis 24 h	LC50= 27 mg/L Lepomis macrochirus 96 h LC50= 41.4 mg/L Pimephales promelas 96 h	EC50 = 34 mg/L 10 min EC50 = 5.6 mg/L 5 min	EC50 = 20763 mg/L 24 h EC50 = 29 mg/L 48 h	2.75
Methylene chloride	EC50> 660 mg/L Selenastrum capricornutum 96 h	LC50= 10.95 mg/L Oncorhynchus mykiss 96 h LC50= 193 mg/L Lepomis macrochirus 96 h LC50= 193 mg/L Pimephales promelas 96 h LC50= 310 mg/L Pimephales promelas 96 h	EC50 = 1 mg/L 24 h EC50 = 2.88 mg/L 15 min	EC50 = 140 mg/L 48 h	1.25
Propylene oxide	EC50= 240 mg/L Selenastrum capricornutum 96 h	LC50= 215 mg/L Lepomis macrochirus 96 h	EC50 = 3300 mg/L 160 min	EC50 = 350 mg/L 48 h	0.08

Persistence and Degradability

No information available

Bioaccumulation

No information available

Mobility

No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with local regulations

Container Disposal

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name
Hazard Class
Description

DOT

Consumer commodity
ORM-D
Consumer commodity ,ORM-D,

TDG

Proper shipping name
Hazard Class
UN-No
Description

Aerosols
2.2
UN1950
AEROSOLS,2.2,UN1950 LTD QTY

ICAO

UN-No
Proper Shipping Name
Hazard Class
Shipping Description

UN1950
Aerosols
2.2
Aerosols,UN1950 LTD QTY

IATA

UN-No
Proper Shipping Name
Hazard Class
ERG Code
Shipping Description

UN1950
Aerosols, non-flammable
2.2
2L
UN1950,Aerosols, non-flammable,2.2 LTD QTY

IMDG/IMO

Proper Shipping Name
Hazard Class
UN-No
EmS No.
Shipping Description

Aerosols
2.2
UN1950
F-D, S-U
UN1950, Aerosols,2.2 LTD QTY

15. REGULATORY INFORMATION

Inventories

TSCA

Complies

DSL

Complies

U.S. Federal Regulations

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Tetrachloroethylene	127-18-4	55-60	0.1
Carbon tetrachloride	56-23-5	0.1-1.0	0.1
Methylene chloride	75-09-2	35-40	0.1
Propylene oxide	75-56-9	0.1-1.0	0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Carbon Dioxide	Not applicable	Not applicable
Tetrachloroethylene	100 lb	Not applicable
Carbon tetrachloride	10 lb	Not applicable
Methylene chloride	1000 lb	Not applicable
Propylene oxide	100 lb	= 10000 lb TPQ

Canada

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

WHMIS Hazard Class

A Compressed gases, D1A Very toxic materials , D2A Very toxic materials , D2B Toxic materials .



16. OTHER INFORMATION

Prepared By	Kamal Singh
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Reason for Revision	No information available
Glossary	No information available
List of References	No information available

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