



# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION

**TRADE NAME** (as labeled) REEL EFX OIL-LESS DIFFUSION FLUID  
 \*For use in the REEL EFX DIFFUSION FOGGER

**SUPPLIERS NAME** REEL EFX, Inc.  
 5539 Riverton Ave.  
 N. Hollywood, CA 91601

Address (complete mailing address):

Phone number for additional information: (818) 762-1710

Date prepared or revised January 19, 2005 Name of preparer\* Jim Gill

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### PRODUCT IDENTIFICATION

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PRODUCT NAME: REEL EFX OIL-LESS DIFFUSION FLUID  
 MSDS#: UCN0262M  
 DATE ISSUED: 03/10/2004  
 SUPERSEDES: 05/12/2002  
 ISSUED BY: 008360

### MATERIAL SAFETY DATA SHEET

Product Name: REEL EFX OIL-LESS DIFFUSION FLUID Effective Date: 03/10/2004

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

##### 1.1 IDENTIFICATION

Product Name REEL EFX OIL-LESS DIFFUSION FLUID

##### 1.2 COMPANY IDENTIFICATION

Distributed by:

REEL EFX, Inc.

5539 Riverton Avenue

North Hollywood, CA. 91601

(818) 762-1710

## 2. COMPOSITION INFORMATION

Component	CAS #	Amount (%W/W )
Triethylene glycol	112-27-6	>= 98
Diethylene glycol	111-46-6	<= 1%

## 3. HAZARDS IDENTIFICATION

### 3.1 EMERGENCY OVERVIEW

Appearance Colorless

Physical State Liquid

Odor Mild

Hazards of product MAY CAUSE SKIN IRRITATION.

### 3.2 POTENTIAL HEALTH EFFECTS

Effects of Single Acute Overexposure

**Inhalation** At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

**Eye Contact** May cause slight temporary eye irritation. Mist may cause eye irritation.

**Skin Contact** Prolonged contact may cause skin irritation with local redness. May cause more severe response if skin is abraded (scratched or cut).

**Skin Absorption** Prolonged skin contact is unlikely to result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.

**Swallowing** Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause nausea or vomiting. May cause abdominal discomfort or diarrhea. May cause dizziness and drowsiness.

#### Chronic, Prolonged or Repeated Overexposure

Effects of Repeated Overexposure Based on available data, repeated exposures are not expected to cause significant adverse effects except at very high aerosol concentrations. Repeated excessive aerosol exposures may cause respiratory tract irritation and even death. Triethylene glycol did not cause birth defects in animals; other effects were seen in the fetus only at very high doses which caused toxic effects to the mother.

Other Effects of Overexposure No information available.

See Section 11 for toxicological information and additional information about potential health effects.

### 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

See Section 12 for Ecological Information.

## 4. FIRST AID PROCEDURES

### 4.1 INHALATION

Move person to fresh air; if effects occur, consult a physician.

### 4.2 EYE CONTACT

Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

### 4.3 SKIN CONTACT

Wash skin with plenty of water.

### 4.4 SWALLOWING

Do not induce vomiting. Seek medical attention immediately. If person is fully conscious give 1 cup or 8 ounces (240 ml) of water. If medical advice is delayed and if an adult has swallowed several ounces of chemical, then give 3-4 ounces (1/3-1/2 cup) (90-120 ml) of hard liquor such as 80 proof whiskey. For children, give proportionally less liquor at a dose of 0.3 ounce (1 1/2 tsp.) (8 ml) liquor for each 10 pounds of body weight, or 2 ml per kg body weight (e.g., 1.2 ounce (2 1/3 tbsp.) for a 40 pound child or 36 ml for an 18 kg child).

#### 4.5 NOTES TO PHYSICIAN

Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be of benefit.

In cases where several ounces have been ingested, consider the use of ethanol and hemodialysis in the treatment. Consult standard literature for details of treatment. If ethanol is used, a therapeutically effective blood concentration in the range of 100 - 150 mg/dl may be achieved by a rapid loading dose followed by a continuous intravenous infusion. Consult standard literature for details of treatment. 4-Methyl pyrazole (Antizol(R)) is an effective blocker of alcohol dehydrogenase and should be used in the treatment of ethylene glycol, di- or triethylene glycol, ethylene glycol butyl ether, or methanol intoxication if available.

Fomepizole protocol (Brent, J. et al., New England Journal of Medicine, Feb. 8, 2001, 344:6, p. 424-9): loading dose 15 mg/kg IV, follow by bolus dose of 10 mg/kg every 12 hours; after 48 hours, increase bolus dose to 15 mg/kg every 12 hours. Continue fomepizole until serum methanol, EG, DEG, or TEG are undetectable. The signs and symptoms of poisoning include anion gap metabolic acidosis, CNS depression, renal tubular injury, and possible late stage cranial nerve involvement. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

#### 5. FIRE FIGHTING MEASURES

##### 5.1 FLAMMABLE PROPERTIES - REFER TO SECTION 9, PHYSICAL AND CHEMICAL PROPERTIES

##### 5.2 EXTINGUISHING MEDIA

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

### 5.3 FIRE FIGHTING PROCEDURES

Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

### 5.4 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

### 5.5 UNUSUAL FIRE AND EXPLOSION HAZARDS

Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

### 5.6 HAZARDOUS COMBUSTION PRODUCTS

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

## 16. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled:

Small spills: Absorb with materials such as: dirt. Sand. Sawdust. Vermiculite. perlite. Zorb-all(R). Oil-Dri or equivalent filler. Large spills: Dike area to contain spill. Pump into suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, Handling for additional precautionary measures.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/ or groundwater. See Section 12, Ecological Information.

## 7. HANDLING AND STORAGE

### 7.1 HANDLING

#### General Handling

Avoid contact with skin and clothing.

Wash thoroughly after handling.

#### Ventilation

General (mechanical) room ventilation is expected to be satisfactory. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

#### Other Precautions

Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

### 7.2 STORAGE

Do not store near food, foodstuffs, drugs or potable water supplies.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### 8.1 EXPOSURE LIMITS

Component	Exposure Limits	Skin. Form
Triethylene glycol	100 mg/m <sup>3</sup> TWA8	Interim IHG
	10 mg/m <sup>3</sup> TWA8 AIHA WEEL	Aerosol
	for Polyethylene Glycol	
Diethylene glycol	10 mg/m <sup>3</sup> TWA8 AIHA WEEL	

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "Yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance. A "Blank" in the Skin Column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

"Interim IHGs" are occupational exposure limits set by the original owner of this product.

### 8.2 PERSONAL PROTECTION

#### Respiratory Protection:

None required if airborne concentrations are maintained below listed exposure limits. If airborne concentrations exceed listed exposure limits, select respiratory protection equipment in accordance with OSHA Standard 29 CFR 1910.134.

Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

In dusty or misty atmospheres, use an approved particulate respirator.

#### Ventilation:

General (mechanical) room ventilation is expected to be satisfactory. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Eye Protection:

Monogoggles or faceshield

Use safety glasses.

If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Protective Gloves:

Polyvinyl chloride coated

Other Protective Equipment:

Eye Bath, Safety Shower

If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures.

When handling hot material, protect skin from thermal burns as well as from skin absorption.

When prolonged or frequently repeated contact could occur, use chemically protective clothing resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Colorless

Odor: Mild

Flash Point -Closed Cup: 1770C 350 F Pensky-Martens Closed Cup  
ASTM D 93

Flammable Limits In Air:

Lower 0.9 %(V) Calculated

Upper 9.2 %(V) Estimated

Autoignition Temperature: 349 C 660 F

Vapor Pressure: < 0.01 mmHg 20 C

Boiling Point (760 mmHg): 288 C 550.4 F

Vapor Density (air = 1): 5.2

Specific Gravity (H2O = 1): 1.1255 20 C 120 C



Freezing Point: -4.3 C 24 F  
Melting Point: Not applicable (for liquids)  
Solubility in Water (by weight): 100  
pH: 8

Molecular Weight: 150 g/mol

Octanol/Water Partition Coefficient - Calculated by Structural  
Fragment Method: - 1.75

Evaporation Rate (Butyl Acetate = 1): < 0.001

## 10. STABILITY AND REACTIVITY

10.1 STABILITY/INSTABILITY Thermally stable at recommended temperatures and pressures.

### Conditions to Avoid:

Exposure to elevated temperatures can cause product to decompose.

Generation of gas during decomposition can cause pressure in closed systems.

### Incompatible Materials:

Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

### Thermal Decomposition:

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Alcohols. Ethers.

10.2 HAZARDOUS POLYMERIZATION Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

#### Peroral

Rat; LD50 (16800 - 22060) mg/kg

#### Percutaneous

Rabbit; LD50 = > 18016 mg/kg

#### Inhalation

Rat; LC50 = > 4.5 mg/L; 4 hours, Aerosol

### DEVELOPMENTAL TOXICITY

Triethylene glycol did not cause birth defects in animals; other effects were seen in the fetus only at very high doses which caused toxic effects to the mother.

### REPRODUCTIVE TOXICITY

In animal studies, did not interfere with reproduction.

### CHRONIC TOXICITY AND CARCINOGENICITY

Did not cause cancer in laboratory animals.

### GENETIC TOXICOLOGY

#### In Vitro

In vitro genetic toxicity studies were negative.

### SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

Based on available data, repeated exposures are not expected to cause significant adverse effects except at very high aerosol concentrations.

Repeated excessive aerosol exposures may cause respiratory tract irritation and even death.

## 12. ECOLOGICAL INFORMATION

### 12.1 ENVIRONMENTAL FATE

Material is ultimately biodegradable. Reaches > 70% mineralization in OECD test(s) for inherent biodegradability. Biodegradation reached in Modified MITI Test (I) (OECD Test No. 301 C) after 28 days: 25 - 92% Biodegradation reached in Modified OECD Screening Test (OECD Test No. 301 E) after 28 days: 23.5 - 63% Biodegradation reached in Modified Zahn-Wellens/EMPA Test (OECD Test No. 302 B) after 28 days: >70 - 95% The rate constant for the vapor phase reaction with photochemically produced hydroxyl radicals at 25C is estimated to be:  $3.64E-1 \text{ l cm}^3/\text{molecule}\cdot\text{sec}$ .

BOD (% Oxygen consumption)

Day 5	Day 10	Day 15	Day 20	Day 28/30
12-32%	15-64%		17-86%	

### 12.2 ECOTOXICITY

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

Toxicity to Micro-organisms

Bacterial/NA; 16 h; EC50

Result value: > 10000 mg/L

Toxicity to Aquatic Invertebrates

water flea (Daphnia magna); LC50

Result value: 39000 mg/L

Toxicity to Aquatic Invertebrates

water flea (Daphnia magna); Immobilization; EC50

Result value: 49000 mg/L

Toxicity to Fish

bluegill (Lepomis macrochirus); LC50

Result value: 61000 mg/L

Toxicity to Fish

fathead minnow (Pimephales promelas); LC50

Result value: 80000 mg/L

Toxicity to Fish

brook trout (*Salvelinus fontinalis*); LC50

Result value: 73500 mg/L

### 12.3 FURTHER INFORMATION

Bioconcentration potential is low ( $BCF < 100$  or  $\text{Log Pow} < 3$ ). Potential for mobility in soil is very high ( $K_{oc}$  between 0 and 50). Soil organic carbon/water partition coefficient ( $K_{oc}$ ) is estimated to be: 10. Henry's Law Constant (H) is estimated to be:  $4.37E-10$  atm-m<sup>3</sup>/mole Theoretical Oxygen Demand (THOD) - calculated:: 1.60 mg/mg

Octanol/Water Partition Coefficient - Calculated by Structural Fragment Method: -1.75

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 DISPOSAL

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER.

All disposal practices must be in compliance with all Federal, State/

rovincial and local laws and regulations. Regulations may vary in different

locations. Waste characterizations and compliance with applicable laws are

the responsibility solely of the waste generator. **VENDOR HAS NO CONTROL OVER**

**THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES**

**HANDLING OR**

**USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE**

**PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION**

**2**

(Composition/ Information on Ingredients). **FOR UNUSED & UNCONTAMINATED**

**PRODUCT**, the preferred options include sending to a licensed, permitted:

Recycler. Reclaimer. Incinerator or other thermal destruction device.

Landfill.

#### 14. TRANSPORT INFORMATION

##### 14.1 U.S. D.O.T.

###### NON-BULK

Proper Shipping Name : NOT REGULATED

###### BULK

Proper Shipping Name : NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

#### 15. REGULATORY INFORMATION

##### 15.1 FEDERAL/NATIONAL

###### OSHA HAZARD COMMUNICATION STANDARD

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

###### SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY

###### PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986) SECTION 313

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

###### SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EMERGENCY

###### PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986) SECTION 302

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III

(EMERGENCY

PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986) SECTIONS 311 AND 312

Delayed (Chronic) Health Hazard : Yes

Fire Hazard : No

Immediate (Acute) Health Hazard : No

Reactive Hazard : No

Sudden Release of Pressure Hazard : No

Toxic SUBSTANCES CONTROL ACT (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA - DOMESTIC SUBSTANCES LIST (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS)

The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

15.2 STATE/LOCAL

PENNSYLVANIA (WORKER AND COMMUNITY RIGHT-TO-KNOW ACT): PENNSYLVANIA HAZARDOUS

SUBSTANCES LIST AND/OR PENNSYLVANIA ENVIRONMENTAL HAZARDOUS SUBSTANCE LIST:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Triethylene glycol	112-27-6	>= 98.0000
Diethylene glycol	111-46-6	<= 1.0000%

PENNSYLVANIA (WORKER AND COMMUNITY RIGHT-TO-KNOW ACT): PENNSYLVANIA SPECIAL

HAZARDOUS SUBSTANCES LIST:

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND Toxic ENFORCEMENT ACT OF

1986) WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Formaldehyde	50-00-0	<= 0.0047%
Acetaldehyde	75-07-0	<= 0.0016%

CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 443.1 % LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS)

VOC: Vapor pressure <0.01 mmHg at 20 C

2 g/l VOC

2 g/l of material less water and less exempted solvents.

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

## 16. OTHER INFORMATION

### 16.2 HAZARD RATING SYSTEM

NFPA ratings for this product are: H - 1 F - 1 R-0

These ratings are part of a specific hazard communication program and should be disregarded where individuals are not trained in the use of this hazard rating system. You should be familiar with the hazard communication programs applicable to your workplace.

### 16.3 RECOMMENDED USES AND RESTRICTIONS

For industrial use.

### 16.4 REVISION

Revision: 03/10/2004

16.5 LEGEND

Bacterial/NA Non Acclimated Bacteria

F Fire

H Health

IHG Industrial Hygiene Guideline

N/A Not available

NFPA National Fire Protection Association

O Oxidizer

R Reactivity

TS Trade secret

VOL/VOL Volume/Volume

W Water Reactive

W/W Weight/Weight

For Additional Information:

Contact: MSDS Coordinator – REEL EFX, Inc.

During business hours, Pacific Time - (818) 762-1710

NOTICE

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Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis.



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END OF MSDS