

# MATERIAL SAFETY DATA SHEET

## FRED\* Anti-Fog Solution

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name** FRED\*Anti-Fog Solution  
**Synonym(s)** Auto Suture Anti-Fog Solution, FRED\*2  
**Manufacturer/Supplier Address** United States Surgical, a Division of TYCO Healthcare Group LP  
195 McDermott Road  
North Haven, CT 06473  
USA  
**Phone Number** (203) 492-5000 (Customer Service)  
**Chemtrec Number** (800) 424-9300 (For Emergencies only)  
(703) 527-3887 (international)  
**Revision Date:** August 1, 2007  
**MSDS Date:** April 20, 2004

*Safety Data Sheet according to EC Directive 2001/58/EC and OSHA's Hazcom Standard (29 CFR 1910.1200)*

*\* trademark of US Surgical*

### 2. HAZARDS IDENTIFICATION

#### EU Main Hazards

Highly flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness.

#### Routes of Entry

- Absorption - Eye contact - Ingestion - Inhalation - Skin contact

#### Carcinogenic Status

Not considered carcinogenic by NTP, IARC, and OSHA.

#### Target Organs

- Central Nervous System - Skin - Eye - Liver - Kidney - Respiratory System

#### Health Effects - Eyes

Liquid, mist or vapor will cause conjunctival irritation and possibly corneal damage.

#### Health Effects - Skin

Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Liquid may be absorbed through the skin but not in toxicologically significant amounts, unless the area of contact is large and exposure prolonged.

#### Health Effects - Ingestion

Swallowing may have the following effects:

- irritation of mouth, throat and digestive tract - central nervous system depression

A large dose may have the following effects:

- dizziness - drowsiness - headache - mental confusion - nerve damage leading to numbness and muscle weakness - fall of blood pressure - liver damage - kidney damage - lung damage

#### Health Effects - Inhalation

Exposure to vapor may have the following effects:

- irritation of nose, throat and respiratory tract - central nervous system depression

Exposure to vapor at high concentrations may have the following effects:

- dizziness - drowsiness - headache - mental confusion - lung damage - fall of blood pressure - liver damage - kidney damage - nerve damage leading to numbness and muscle weakness

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Component Name	CAS#/EC#	Concentration	R Phrases	Classification
Isopropyl alcohol	67-63-0 200-661-7	< 15.00%	R11, R36, R67	F, Xi
Surfactant	Trade secret	< 2.00 %	R-None	None
Water	7732-18-5 231-791-2	> 85.00%	R-None	None

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### 4. FIRST AID MEASURES

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#### Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

#### Skin

Immediately wash skin thoroughly with soap and water. Continue washing for at least 15 minutes. Obtain medical attention if blistering occurs or redness persists.

#### Ingestion

Have victim drink 1-3 glasses of water to dilute stomach contents. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

#### Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

#### Advice to Physicians

Monitor for systemic secondary effects on liver and kidney; support and treat.

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### 5. FIRE-FIGHTING MEASURES

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#### Extinguishing Media

Use foam, dry chemical or carbon dioxide. Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

#### Unusual Fire and Explosion Hazards

Vapors can travel a considerable distance to a source of ignition and flashback. Flashback can occur if air temperature exceeds flash point. Be aware of possibility of re-ignition.

#### Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

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### 6. ACCIDENTAL RELEASE MEASURES

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Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Wear appropriate protective clothing. Eliminate all sources of ignition. Vapors can accumulate in low areas. Consider need for evacuation. Prevent the material from entering drains or water courses. Notify authorities if spill has entered water course or sewer or has contaminated soil or vegetation.

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### 7. HANDLING AND STORAGE

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Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use. Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - away from incompatible materials

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### Occupational Exposure Standards

##### Isopropyl alcohol

ACGIH: TLV 200ppm 8h TWA. A4(not classifiable as a human carcinogen)

ACGIH: STEL 400ppm 15min TWA.

OSHA: PEL 400ppm (980mg/m<sup>3</sup>) 8h TWA.

OSHA: STEL 500ppm(1225mg/m<sup>3</sup>) 15 min.

Can be absorbed through skin.

#### Surfactant

None assigned.

#### Engineering Control Measures

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

#### Respiratory Protection

Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

#### Hand Protection

Chemical resistant gloves

For isopropyl alcohol, gloves made of polyvinyl alcohol do not provide adequate protection.

#### Eye Protection

Chemical goggles or safety glasses with side shields

#### Body Protection

If there is danger of splashing, wear: - overall or apron

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical State</b>	Liquid
<b>Color</b>	Clear
<b>Odor</b>	Alcoholic
<b>pH</b>	5
<b>Specific Gravity</b>	0.986
<b>Boiling Range/Point (°C/F)</b>	88.8/192
<b>Melting Point (°C/F)</b>	No data.
<b>Flash Point (PMCC) (°C/F)</b>	37/98.7
<b>Vapor Pressure</b>	No data.
<b>Solubility in Water</b>	No data.
<b>Vapor Density (Air = 1)</b>	No data.
<b>Viscosity (cSt)</b>	No data.
<b>VOC (g/l)</b>	98.6

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### 10. STABILITY AND REACTIVITY

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#### Stability

Stable under normal conditions.

#### Conditions to Avoid

- Heat - High temperatures - Static discharge - Exposure to direct sunlight - Mechanical shock

#### Materials to Avoid

- Strong oxidizing agents - Acids - Bases - Isopropyl alcohol may attack some forms of plastic, rubber and coatings

#### Hazardous Polymerization

Will not occur.

#### Hazardous Decomposition Products

- oxides of carbon

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### 11. TOXICOLOGICAL INFORMATION

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#### Acute Toxicity

Material may be harmful by skin absorption.

Isopropyl Alcohol: Oral LD50 (rat) 5045 mg/kg. Dermal LD50 (rabbit) 12800mg/kg. Inhalation LCLO (rat) 1600ppm 4h

Surfactant: Oral LD50 (mouse) 2.64 g/kg

#### Chronic Toxicity/Carcinogenicity

(Isopropyl Alcohol) IARC assessment: this product is not classifiable as to its carcinogenicity to humans (Group 3). Chronic/Subchronic studies resulted in adverse effects to: - liver - spleen - biochemical effects - brain tissue degeneration - changes in reflex behavior - sensory nerve damage

#### Genotoxicity

Isopropyl Alcohol: Cytogenic analysis (rat, inhalation).

#### Reproductive/Developmental Toxicity

(Isopropyl Alcohol) Experimental studies in animals have provided some evidence of embryo/fetotoxicity and birth defects only at doses producing marked maternal toxicity.

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### 12. ECOLOGICAL INFORMATION

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#### Mobility

(Isopropyl Alcohol)

If released to soil, isopropyl alcohol is expected to have very high mobility.

(Surfactant)

If released to soil, the expected mobility of the surfactant is low to very high.

#### Persistence/Degradability

(Isopropyl Alcohol)

Isopropyl alcohol is readily degraded in aerobic aqueous systems.

(Surfactant)

Several studies have shown that the surfactant biodegrades rapidly.

#### Bio-accumulation

(Isopropyl Alcohol)

An estimated BCF of 3 suggests the potential for bioconcentration in aquatic organisms is low.

(Surfactant)

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### 12. ECOLOGICAL INFORMATION

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Aquatic bioconcentration is not expected to be an important fate process.

#### Ecotoxicity

(Isopropyl Alcohol)

Tests on the following species gave a 96h LC50 of 1150mg/litre: - brown shrimp

Tests on the following species gave a 96h LC50 of 6.12-9.64mg/litre: - fathead minnows

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### 13. DISPOSAL CONSIDERATIONS

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Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near to the container. Do not incinerate closed containers. Empty containers may contain hazardous residues. Dispose of containers with care.

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### 14. TRANSPORT INFORMATION

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**DOT CFR 172.101 Data** Not Regulated per 49 CFR 173.4 Small Quantity Exemption

**UN Proper Shipping Name** None

**UN Class** None

**UN Number** None

**UN Packaging Group** None

NOTE: This material is packaged and distributed by United States Surgical in conformance with the criteria for "Consumer Commodity" (40 CFR §171.8), and exceptions in 49 CFR §173.150, as well with the "Limited Quantities" criteria in Section 2.8.1 of IATA.

**Classification for AIR  
Transportation (IATA)**

Consult current IATA Regulations prior to shipping by air.

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### 15. REGULATORY INFORMATION

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#### EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments (2001/60/EC and 2006/8/EC).

#### EU Hazard Symbol and Indication of Danger

F - Highly flammable

Xi - Irritant

#### R phrases

R11 - Highly flammable.

R36 - Irritating to eyes.

R67 - Vapours may cause drowsiness and dizziness

#### S phrases

S2 - Keep out of reach of children.

S7 - Keep container tightly closed.

S16 - Keep away from sources of ignition - No smoking.

S33 Take precautionary measures against static discharges.

S43 In case of fire use: - carbon dioxide - dry chemical - foam

S24/25 - Avoid contact with skin and eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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### 15. REGULATORY INFORMATION

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<b>US Regulations(Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS</b>
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#### **TSCA Listing**

This product contains ingredient(s) that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance(TSCA) Inventory.

#### **EINECS Listing**

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS) or are exempt from listing.

#### **DSL/NDSL (Canadian) Listing**

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

#### **WHMIS Classification**

D.2.B , B.2

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

#### **MA Right To Know Law**

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimus concentration include: - Isopropyl Alcohol

#### **PA Right To Know Law**

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - Isopropyl Alcohol

#### **NJ Right To Know Law**

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: - Isopropyl Alcohol

#### **California Proposition 65**

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

#### **SARA Title III Sect. 302 (EHS)**

This product does not contain any chemicals subject to SARA Title III Section 302.

#### **SARA Title III Sect. 304**

This product does not contain any chemicals subject to SARA Title III Section 304.

#### **SARA Title III Sect. 311/312 Categorization**

Immediate (Acute) Health Hazard

Delayed (Chronic) Health Hazard

Flammable

#### **SARA Title III Sect. 313**

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

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### 16. OTHER INFORMATION

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#### **NFPA Ratings**

NFPA Code for Flammability - 3

NFPA Code for Health - 2

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

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### 16. OTHER INFORMATION

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#### HMIS Ratings

HMIS Code for Flammability - 3

HMIS Code for Health - 2

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

#### Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

F: Highly Flammable

**Prepared By:** EnviroNet LLC.

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