SAFETY DATA SHEETS

This SDS packet was issued with item:

078435434

N/A

Living up to Life

Safety Data Sheet

Cytology Fixative (Non-Aerosol)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/ UNDERTAKING

1.1 Product Identifier

Trade Name	**Cytology Fixative**
Product #	3801799 3801800 3801825
SDS #	107
SDS Date	August 22, 2013

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use:	Fixation of cytology cell spreads. In vitro diagnostic.
Uses Advised Against:	All other uses.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Preparer:	Leica Biosystems Richmond, Inc. 5205 Route 12 Richmond, IL 60071 800-225-8867	Leica Biosystems Canada, Inc. 83 Terracon Place Winnipeg, Manitoba R2J 4B3 800-665-7425

1.4 Emergency Telephone Number

Emergency Spill Information	1-800- 424-9300 (CHEMTREC) +1 703-527-3887 International calls (call collect)
Other Product Information:	1-800-225-8867

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008):

Physical:	Health:	Environmental
Flammable Liquid Category 2	Specific Target Organ Toxicity - Single Exposure Category 1	Not Hazardous

EU Classification (67/548/EEC): F, Xn, R11, R68/20/21/22

2.2 Label Elements

DANGER! Contains methanol

Hazard Phrases

H225	Highly flammable liquid and vapour.

H370	Causes damage to nervous system and eyes.

Precautionary Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measure against static discharge.
P260	Do not breathe vapors.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves, protective clothing and eye protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/physician.
P370 + P378	In case of fire: use dry chemical, foam or water spray for extinction.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of container to approved disposal site.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	EU Classification (67/548/EEC)	CLP/GHS Classification (1272/2008)
Ethanol	64-17-5 200-578-6	<90	F R11	Flammable Liquid Category 2 (H225)
Isopropanol	67-63-0 200-661-7	<5	F, Xi R11, R36, R67	Flammable Liquid Category 2 (H225) Eye Irritation Category 2A (H319) Specific Target Organ Toxicity – Single Exposure Category 3 (H336)
Methanol	67-56-1 200-659-6	<5	F, T R11, R23/24/25, R39/23/24/25	Flammable Liquid Category 2 (H225) Acute Toxicity Category 3 (H301, H311, H331) Specific Target Organ Toxicity – Single Exposure Category 1 (H370)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

First Aid

Eye contact: Immediately flush eye with water for at least 15 minutes while lifting the upper and lower lids. Get medical attention if irritation persists.

Skin contact: Wash thoroughly with soap and water. Get medical attention if irritation develops. Remove contaminated clothing and launder before reuse.

Inhalation: Remove victim to fresh air. Get medical attention if irritation persists. If breathing is difficult have qualified individual administer oxygen and get immediate medical attention. If breathing stops, give artificial respiration and get immediate medical attention.

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. If the victim is conscious and alert, have them rinse their mouth with water. Never give anything by mouth to an unconscious or drowsy person. Get immediate medical attention.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: May cause eye, skin and respiratory irritation. Inhalation of vapors may cause abdominal pain and nervous system effects including dizziness, drowsiness, nausea, vomiting, visual disturbances and unconsciousness. Harmful or fatal if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical treatment is required for ingestion.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media:
Use dry chemical, alcohol-resistant foam, carbon dioxide (CO2), or water spray.

5.2 Special Hazards Arising from the Substance or Mixture
Unusual Fire and Explosion Hazards: Highly flammable liquid and vapor. Vapors are heavier than air and will travel along surfaces to remove ignition sources and flash back. Vapors will collect in low areas. Vapors may be ignited by static sparks. Flames may be invisible in daylight.
Combustion Products: Oxides of carbon, smoke.

5.3 Advice for Fire-Fighters: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate protective equipment. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Prevent entry into basements or confined areas.

6.2 Environmental Precautions:

Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.

6.3 Methods and Material for Containment and Cleaning Up:

Stop spill at the source if it is safe to do so. Absorb with an inert material. Use non-sparking tools and equipment. Collect into a suitable container for disposal.

6.4 Reference to Other Sections:
Refer to Section 8 for personal protective equipment and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for Safe Handling:
Avoid eye and skin contact. Avoid breathing vapors. Use only with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and launder before re-use. Keep product away from heat, sparks and all other sources of ignition. Electrically bond and ground transfer equipment, Use appropriately rated electrical equipment in areas where this material is handled and stored. Keep containers closed when not in use.

7.2 Conditions for Safe Storage, Including any Incompatibilities:
Keep product away from heat, sparks and all other sources of ignition. Electrically bond and ground transfer equipment, Use appropriately rated electrical equipment in areas where this material is handled and stored.

Protect containers from physical damage. Store in a cool area. Keep away from excessive heat and open flames. Keep containers closed when not in use. Store away from oxidizers.

Empty containers retain product residues. Do not cut, weld, braze, etc. on or near empty containers. Follow all SDS precautions in handling empty containers

7.3 Specific end use(s):
Industrial uses: None identified
Professional uses: In vitro diagnostic

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Ethanol	1000 ppm TWA OSHA PEL 1000 ppm STEL ACGIH TLV	None Established	1000 ppm TWA	500 ppm TWA 1000 ppm STEL
Isopropanol	400 ppm TWA OSHA PEL 200 ppm TWA, 400 ppm STEL ACGIH TLV	None Established	400 ppm TWA, 500 ppm STEL	200 ppm TWA, 400 ppm STEL
Methanol	200 ppm TWA OSHA PEL 200 ppm TWA, 250 ppm STEL skin ACGIH TLV	200 ppm TWA skin	200 ppm TWA, 250 ppm STEL	200 ppm TWA, 800 ppm STEL

Refer to local or national authority for exposure limits not listed above.

Chemical Name	Biological Limit Value
Ethanol	None Established
Isopropanol	Acetone in urine 40 mg/L, end of shift at end of workweek (ACGIH)
Methanol	Methanol in urine 15 mg/L, end of shift (ACGIH)

8.2 Exposure Controls:

Recommended Monitoring Procedures: Collection on charcoal tubes with analysis by gas chromatography.

Appropriate Engineering Controls: Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits. Use explosion-proof equipment where required.

Personal Protective Measurers

Eye/face Protection: Wear safety glasses or chemical goggles.

Skin Protection: Impervious clothing as needed to avoid skin contact.

Hands: Impervious gloves recommended (butyl or nitrile rubber)**.**

Respiratory Protection: None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved supplied air respirator. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good Industrial Hygiene practice.

Other protection: Suitable washing facilities should be available.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties

Appearance: Clear, colorless liquid
Odor Threshold: Not established
Melting/Freezing Point: -101℃ (-151℃ F
Flash Point: : 14 ℃ (57℉) (Closed Cup)
Lower Flammability Limit: 3.3%
Upper Flammability Limit: 19%
Vapor Density(Air=1): >1
Solubility: Soluble in water
Autoignition Temperature: 363°C (685℉)
Viscosity: Not established

Oxidizing Properties: None
Molecular Formula: Mixture

Odor: Alcohol odor
pH: Not applicable
Boiling Point: 78-80ºC (172-176℉)
Evaporation Rate: Not determined
Vapor Pressure: 59.5 hPa (44.6 mmHg) @ 20℃

Relative Density: 0.8
Octanol/Water Partition Coefficient: Not available
Decomposition Temperature: Not established
Explosive Properties: Vapors may be explosive in confined areas.
Specific Gravity (H_2O= 1): 0.8
Molecular Weight: Mixture

9.2 Other Information: None available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity: This material is not reactive under normal conditions.

10.2 Chemical Stability: Normally stable.

10.3 Possibility of Hazardous Reactions: Reaction with strong oxidizers will generate heat and cause fire.

10.4 Conditions to Avoid: Avoid heat, sparks, flames, and all other sources of ignition.

10.5 Incompatible Materials: Oxidizing agents, strong acids and bases.

10.6 Hazardous Decomposition Products: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Potential Health Effects:

Eye Contact: May cause irritation with redness, tearing and swelling.

Skin contact: May cause irritation and dryness. Repeated exposure may cause dermatitis. May be harmful if absorbed through the skin.

Inhalation: May cause respiratory tract irritation and central nervous system effects such as dizziness, drowsiness, nausea, vomiting, visual disturbances and unconsciousness.

Ingestion: Swallowing may cause gastrointestinal effects including abdominal pain, nausea and diarrhea and central nervous system effects including dizziness, drowsiness, nausea, vomiting, visual disturbances and unconsciousness. May cause permanent blindness.

Acute toxicity:

Ethanol: LD50 oral rat 7060 mg/kg; LC50 inhalation rat 20000 ppm/10 hr.
Isopropanol: LD50 oral rat 5045 mg/kg; LD50 dermal rabbit 12,800 mg/kg;
Methanol: LD50 oral rat 5628 mg/kg; LC50 inhalation rat 64000 ppm/4 hr; LD50 dermal rabbit 15,800 mg/kg

Skin corrosion/irritation: No data available for mixture. Components are mild skin irritants.

Eye damage/ irritation: No data available for mixture. Isopropanol is irritating to eyes.

Respiratory Irritation: No data available for mixture. High concentrations of vapors may be irritating to the respiratory system.

Respiratory Sensitization: No data available for mixture. None of the components are respiratory sensitizers.

Skin Sensitization: No data available for mixture. None of the components are skin sensitizers.

Germ Cell Mutagenicity: No data available for mixture. None of the components are germ cell mutagens.

Carcinogenicity: No data available for mixture. None of the components of this product are listed as carcinogens by OSHA, ACGIH, IARC, NTP, or the EU Dangerous Substances Directive. Ingestion of alcoholic beverages is known to cause cancer in humans (IARC group 1).

Reproductive Toxicity: No data available for mixture. Ethanol is known to cause developmental toxicity when intentionally ingested during pregnancy.

Specific Target Organ Toxicity:

Single Exposure: Methanol has been found to cause visual and nervous system damage in studies with humans and animals.

Repeat Exposure: Ethanol when consumed as a beverage has been found to cause damage to the liver, nervous system and reproductive system.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:

Ethanol: LC50 rainbow trout 13000 mg/L/96 hr; LC50 daphnia magna 9268-14221 mg/L/48 hr; EC50 Chlorella pyrenoidosa (Green algae; growth inhibition) 9310 mg/L/48 hr
Isopropanol: LC50 fathead minnows 11,130 mg/L/48 hr; LC50 brown shrimp 1400 mg/L/48 hr
Methanol: LC50 fathead minnows 29,400 mg/L/96 hr; EC50 daphnia magna >10,000 mg/L/24 hr

12.2 Persistence and degradability: Ethanol, methanol and isopropanol are readily biodegradable in screening tests

12.3 Bioaccumulative Potential: Ethanol and isopropanol have an estimated BCF of 3 and methanol an estimated BCF of <10 suggesting that the potential for bioaccumulation is low.

12.4 Mobility in Soil: Ethanol, methanol and isopropanol are expected to have very mobility in soil.

12.5 Results of PVT and vPvB assessment: Not required.

12.6 Other Adverse Effects: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods:
Dispose in accordance with local, state and national regulations.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1987	Alcohols, n.o.s. (ethanol, methanol)	3	II	No
Canadian TDG	UN1987	Alcohols, n.o.s. (ethanol, methanol)	3	II	No
EU ADR/RID	UN1987	Alcohols, n.o.s. (ethanol, methanol)	3	II	No
IMDG	UN1987	Alcohols, n.o.s. (ethanol, methanol)	3	II	No
IATA/ICAO	UN1987	Alcohols, n.o.s. (ethanol, methanol)	3	II	No

14.6 Special Precautions for User: None
14.7 Transport in Bulk According to Annex III MARPOL 73/78 and the IBC Code: Not determined.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

INTERNATIONAL INVENTORIES

EPA TSCA INVENTORY: All of the components are listed on the TSCA inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

EUROPEAN UNION: All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).

CHINA: All of the ingredients are listed on the Chinese chemical inventory.

KOREA: All of the components of this product are listed on the Korean Existing Chemical List (KECL).

NEW ZEALAND: All of the components of this product are listed on the New Zealand Inventory of Chemicals (NzloC).

PHILIPPINES: All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

JAPAN: All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).

U.S. REGULATIONS

OSHA HAZARD CLASSIFICATION: Flammable, Irritant, Target Organ Effects

EPA SARA 302: This product does not contain chemicals regulated under SARA Section 302.

EPA SARA 311 HAZARD CLASSIFICATION: Acute Health, Chronic Health, Fire Hazard

EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:
Methanol 67-56-1 <5%

CALIFORNIA PROPOSITION 65: This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects (developmental toxicity): Methanol <5% (Reproductive).

INTERNATIONAL REGULATIONS

WHMIS CLASSIFICATION: Class B-2, Class D-2-B

SECTION 16: OTHER INFORMATION

Revision History: Updated Logo and website.

EU Classes and Risk Phrases for Reference (See Sections 2 and 3)
F Highly Flammable
T Toxic
Xi Irritant
R11 Highly Flammable
R36 Irritating to eyes.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed
R67 Vapours may cause drowsiness and dizziness.
R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed

CLP/GHS Classification and H Phrases for Reference (See Section 3)
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H336 May cause drowsiness or dizziness.
H370 Causes damage to nervous system and eyes.

NFPA Rating:	Health: 2	Fire: 3	Instability: 0
HMIS Rating:	Health: 2	Fire: 3	Physical Hazard: 0

Common Name: SAFETEX CYTOLOGY FIXATIVE FSPI
Manufacturer: ANDWIN SCIENTIFIC
Revision: (No Data Listed)

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: SAFETEX CYTOLOGY FIXATIVE FSP1

ANDWIN SCIENTIFIC
6636 VARIEL AVE
CANOGA PARK, CA 91303 (818) 999-2828
IN CASE OF EMERGENCY CONTACT ANDWIN AT (800) 497-3113

CHEMICAL NAME: SOLUTION OF: 95% ISOPROPANOL
3% DISTILLED WATER
2% POLYETHYLENE GLYCOL 1450

FORMULA: 95% (CH3)2CHOH
3% H2O
2% HO-(CH2CH2O)n-H

MOLECULAR WEIGHT: 1510.10

SYNONYMS: 95% 2-PROPANOL,SEC-PROPYL ALCOHOL, ISOPROPANOL
3% DISTILLED WATER
2% POLYETHYLENE GLYCOL 1450

CAS# AND NAME: 95% ISOPROPYL ALCOHOL (67-63-0)
3% DISTILLED WATER (007732-18-5)
2% POLY(OXY-1,2-ETHANEDIYL), A-HYDRO-W-HYDROXY-

2. PHYSICAL DATA

BOILING POINT: 86 DEGREES C (187 DEGREES F)

SPECIFIC GRAVITY (H2O=1): 0.79

FREEZING POINT: -85C (-121F)

VAPOR PRESSURE AT 20 DEG. C: 30 MMHG (ESTIMATED BASED ON ISOPROPYL ALCOHOL)

VAPOR DENSITY (AIR =1): 2.0 (ESTIMATED BASED ON ISOPROPYL ALCOHOL)

EVAPORATION RATE
(BUTYL ACETATE =1): 2.5 (ESTIMATED BASED ON ISOPROPYL ALCOHOL)

SOLUBILITY IN WATER BY WT.: INFINITIVE IN WATER

APPEARANCE: CLEAR, COLORLESS LIQUID

ODOR: RUBBING ALCOHOL

PHYSICAL STATE: LIQUID

PRECAUTIONARY MEASURES
WARNING! FLAMMABLE LIQUID, HARMFUL IF SWALLOWED OR INHALED, AFFECTS CENTRAL NERVOUS SYSTEM, CAUSES IRRITATION.
KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINER CLOSED. USE WITH ADEQUATE VENTILATION. AVOID BREATHING VAPOR. WASH THOROUGHLY AFTER HANDLING.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

EMERGENCY FIRST AID
IF SWALLOWED, GIVE WATER TO DRINK. INDUCE VOMITING IF MEDICAL HELP IS NOT IMMEDIATELY AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IN ALL CASES CALL A PHYSICIAN. SEE SECTION 6.

DOT HAZARD CLASS: FLAMMABLE LIQUID

NFPA RATINGS: HEALTH: 1
FLAMMABILITY: 3
REACTIVITY: 0

FIRE AND EXPLOSION: FLAMMABLE LIQUID FLASH POINT: 12 c (53F),(CLOSED CUP). AUTO IGNITION TEMPERATURE: 399 C (750F). FLAMMABLE LIMITS IN AIR,% BY VOLUME:
LEL: 2.0; EUL: 12.0

SECTION 3

EXPLOSION: ABOVE FLASH POINT, VAPOR-AIR MIXTURES ARE EXPLOSIVE WITHIN FLAMMABLE LIMITS NOTED ABOVE. CONTACT WITH STRONG OXIDIZERS MAY CAUSE FIRE OR
EXPLOSION.

FIRE EXTINGUISHING: MEDIA: WATER SPRAY, DRY CHEMICAL, ALCOHOL FOAM, OR CARBON
DIOXIDE. WATER SPRAY MAY BE USED TO KEEP FIRE EXPOSED CONTAINERS COOL.

SPECIAL INFORMATION: IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND
NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE OPERATED
IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MADE. WATER MAY BE USED TO FLUSH SPILLS AWAY FROM EXPOSURES AND TO DILUTE SPILLS TO NON-FLAMMABLE MIXTURES. VAPORS CAN FLOW ALONG SURFACES TO DISTANT IGNITION SOURCE AND FLASH
BACK.

SECTION 4

REACTIVITY DATA: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE. HEAT AND SUNLIGHT CAN CONTRIBUTE TO INSTABILITY.

HAZARDOUS-DECOMPOSITION PRODUCTS: TOXIC GASES AND VAPORS SUCH AS CARBON MONOXIDE MAY BE RELEASED IN A FIRE INVOLVING ISOPROPYL ALCOHOL.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

INCOMPATIBILITIES: HEAT, FLAME STRONG OXIDIZERS, ACETALDEHYDE, CHLORINE, ETHYLENE OXIDE, HYDROGEN-PALLADIUM COMBINATION, HYDROGEN PEROXIDE-SULFURIC ACID
COMBINATION, POTASSIUM TERT-BUTOXIDE, HYPOCHLOROUS ACID, ISOCYANATES, NITROFORM, PHOSGENE, OLEUM AND PERCHLORIC ACID.

SECTION 5

LEAK/SPILL DISPOSAL INFORMATION:
REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA OF LEAK OR SPILL. CLEAN-UP PERSONNEL REQUIRE PROTECTIVE CLOTHING AND RESPIRATORY PROTECTION FROM VAPORS. SMALL SPILLS MAY BE ABSORBED ON PAPER TOWELS AND EVAPORATED IN A FUME HOOD. ALLOW ENOUGH TIME FOR FUMES TO CLEAR HOOD, THEN IGNITE PAPER IN A SUITABLE LOCATION AWAY FROM COMBUSTIBLE MATERIALS. CONTAIN AND RECOVER LIQUID FOR RECLAMATION WHEN POSSIBLE. LARGER SPILLS AND LOT SIZES CAN BE COLLECTED AS HAZARDOUS WASTE AND ATOMIZED IN A SUITABLE RCRA APPROVED COMBUSTION CHAMBER, OR
ABSORBED WITH VERMICULITE, DRY SAND, EARTH OR SIMILAR MATERIAL FOR DISPOSAL AS
HAZARDOUS WASTE IN A RCRA APPROVED FACILITY.

ENSURE COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

SECTION 6

HEALTH HAZARD INFORMATION:
A. EXPOSURE/HEALTH EFFECTS

INHALATION: MAY CAUSE IRRITATION OF THE NOSE AND THROAT. EXPOSURE TO HIGH CONCENTRATIONS HAS A NARCOTIC EFFECT, PRODUCING SYMPTOMS OF DROWSINESS, HEADACHE, STAGGERING, UNCONSCIOUSNESS AND POSSIBLY DEATH.

INGESTION: MAY CAUSE DROWSINESS, UNCONSCIOUSNESS, AND DEATH. GASTROINTESTINAL
PAIN, CRAMPS, NAUSEA, VOMITING, AND DIARRHEA MAY ALSO RESULT. THE SINGLE LETHAL DOSE FOR HUMAN ADULT=ABOUT 250 mls (SAX SIXTH EDITION).

SKIN CONTACT: HAS A DEFATTING ACTION OF THE SKIN THAT CAN CAUSE IRRITATION. MAY CAUSE IRRITATION WITH A STINGING EFFECT AND BURNING SENSATION.

EYE CONTACT: VAPORS MAY IRRITATE THE EYES. SPLASHES MAY CAUSE SEVERE IRRITATION, DRYING, CRACKING, OR CONTACT DERMATITIS MAY DEVELOP.

CHRONIC EXPOSURE: PROLONGED CONTACT WITH SKIN MAY CAUSE MILD IRRITATION,

DRYING, CRACKING, OR CONTACT DERMATITIS MAY DEVELOP.

AGGRAVATION OF PRE-EXISTING CONDITIONS: PERSONS WITH PRE-EXISTING SKIN DISORDERS OR EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

B. FIRST AID

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

INGESTION: GIVE WATER TO DRINK. INDUCE VOMITING IF MEDICAL HELP IS NOT IMMEDIATELY AVAILABLE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
GET MEDICAL ATTENTION IMMEDIATELY.

SKIN EXPOSURE: REMOVE ANY CONTAMINATED CLOTHING. WASH SKIN WITH SOAP OR MILD
DETERGENT AND WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

EYE EXPOSURE: WASH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING
LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

C. TOXICITY: (RTECS, 1986)
ORAL RAT LD50: 5840 MG/KG. SKIN RABBIT LD50: 13 GM/KG. INHALATION RAT LC50: 16000 PPM/8H. MUTATION REFERENCES CITED AQUATIC TOXICITY RATING.
TLM96: 1000-10 PPM

SECTION 7

OCCUPATIONAL CONTROL MEASURES

AIRBORNE EXPOSURE LIMITS:-OSHA PERMISSIBLE EXPOSURE LIMIT(PEL): 400 PPM (TWA),
500 PPM (STEL)-ACGIH THRESHOLD LIMIT VALVE(TLV): 400 PPM (TWA), 500 PPM (STEL)

VENTILATION SYSTEM: A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO
KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED
BECAUSE IT CAN SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA. PLEASE REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION A MANUAL OF RECOMMENDED
PRACTICES", MOST RECENT EDITION, FOR DETAILS.

PERSONAL RESPIRATORS: (NIOSH APPROVED) IF THE TLV IS EXCEEDED A FULL FACE PIECE CHEMICAL CARTRIDGE RESPIRATOR MAY BE WORN, IN GENERAL, UP TO THE
MAXIMUM USE CONCENTRATION SPECIFIED BY THE RESPIRATOR

SUPPLIER. ALTERNATIVELY, A SUPPLIED AIR FULL FACE PIECE
RESPIRATOR OR AIRLINED HOOD MAY BE WORN.

SKIN PROTECTION: WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES,
LAB COAT, APRON OR COVERALLS TO PREVENT SKIN CONTACT.

EYE PROTECTION: USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

SECTION 8

STORAGE AND SPECIAL INFORMATION

PROTECT AGAINST PHYSICAL DAMAGE. STORE IN A COOL, DRY WELL-VENTILATED LOCATION, AWAY FROM ANY AREA WHERE THE FIRE HAZARD MAY BE ACUTE. CUTSIDE OF DETACHED STORAGE IS PREFERRED. SEPARATE FROM OXIDIZING MATERIALS. CONTAINERS
SHOULD BE BONDED AND GROUNDED FOR TRANSFERS TO AVOID STATIC SPARKS. STORAGE AND USE AREAS SHOULD BE NO SMOKING AREAS. USE NON-SPARKING TYPE TOOLS AND EQUIPMENT.

ADDENDUM TO MATERIAL SAFETY DATA SHEET REGULATORY STATUS

THIS ADDENDUM MUST NOT BE DETACHED FROM THE MSDS IDENTIFIES SARA 313 SUBSTANCE(S) ANY COPYING OR REDISTRIBUTION OF THE MSDS MUST INCLUDE A COPY OF THIS ADDENDUM.

HAZARD CATEGORIES FOR SARA SECTION 311/312 REPORTING

ACUTE	CHRONIC	FIRE	PRESSURE	REACTIVE
X	X	X		

PRODUCT OR COMPONENTS OF PRODUCT:	SARA EHS SEC.302		SARA SEC. 313 CHEMICALS		CERCLA	RCRA
	RQ	TPQ	NAME LIST	CHEMICAL CATEGORY	SEC.103 RQ lbs	SEC. 261.33
PROPYLENE GLYCOL (0000-57-55-6)	NO	NO	YES	NO	NO	NO
ISOPROPYL ALCOHOL (67-63-0)	NO	NO	YES	NO	NO	NO

SARA SECTION 302 EHS RQ:
REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, LISTED AT 40 CFR 355.

SARA SECTION 302 EHS TPQ:
THRESHOLD PLANNING QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE. AN ASTERISK (*)
FOLLOWING A THRESHOLD PLANNING QUANTITY SIGNIFIES THAT IF THE MATERIAL IS A SOLID AND HAS A PARTICLE SIZE EQUAL TO OR LARGER THAN 100 MICROMETERS, THE THRESHOLD PLANNING QUANTITY = 10,000 LBS.

SARA SECTION 313 CHEMICALS:
TOXIC SUBSTANCES SUBJECT TO ANNUAL RELEASE REPORTING REQUIREMENTS LISTED AT 40
CFR 372.65

CERCLA SEC. 103:
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (SUPERFUND) RELEASES TO AIR, LAND OR WATER OF THESE HAZARDOUS SUBSTANCES WHICH
EXCEED THE REPORTABLE QUANTITY (RQ) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, (800-424-8802) LISTED AT 40 CFR 302.4

RCRA:
RESOURCE CONSERVATION AND RECLAMATION ACT. COMMERCIAL CHEMICAL PRODUCT WASTES
DESIGNATED AS ACUTE HAZARDS AND TOXIC UNDER 40 CFR 261.33