# FLUKE NETWORKS

equipment .NET

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1.0-20.0

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Company Address:** 6920 Seaway Blvd

Everett, WA 98203

 Product Information:
 800-283-5853
 Emergency:
 800-424-9300

 Customer Service:
 800-283-5853
 Revision Date:
 February 10, 2007

**Product Identification** 

Isopropanol

Fiber Optic Solvent Pen						
Product Code: FW2150						
SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS						
Chemical Name	CAS No.	Wt. % Range				
Naphtha	64741-66-8	60.0-90.0				
Ethanol	64-17-5	1.0-25.0				
Ethyl acetate	141-78-6	0.1-10.0				

#### SECTION 3: HAZARD IDENTIFICATION

Emergency Overview: Clear, colorless liquid with mild hydrocarbon odor. This product is extremely flammable. Liquid may irritate eyes and skin under repeated or prolonged exposure. Breathing high concentrations of product may produce drowsiness and a headache.

Potential Health Effects:

67-63-0

Eyes: Liquid and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation.

Skin: Contact causes skin irritation.

Ingestion: Harmful if swallowed. Irritating to the mouth, throat and stomach. May cause vomiting.

Inhalation: Harmful if inhaled. High concentrations in immediate area can displace oxygen and cause dizziness, unconsciousness and even death, with longer exposure.

Keep people away from such vapors without self-contained breathing apparatus.

Pre-Existing Medical Conditions Aggravated by Exposure: Heart, lung, skin, eye.

# **SECTION 4: FIRST AID MEASURES**

Eyes: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel if irritation develops or persists.

<u>Skin:</u> Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persist. Wash clothing separately before reuse. <u>Ingestion:</u> If swallowed, do not induce vomiting. Keep head below knees to minimize chance of aspirating material into the lungs. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

# **SECTION 5: FIRE FIGHTING MEASURES**

Flash Point: 45 F (7C) TCC

<u>LEL/UEL:</u> 0.9/6.2 (% by volume in air)

 $\underline{\underline{Extinguishing\ Media:}}\ Use\ alcohol\ foam,\ carbon\ dioxide\ or\ water\ spray\ when\ fighting\ fires\ involving\ this\ material.$ 

<u>Fire Fighting Instructions:</u> As in any fire, wear self-contained breathing apparatus (pressure demand, MSHA/NIOSH approved or equivalent) and full protective gear.

# SECTION 6: ACCIDENTAL RELEASE MEASURES

<u>Large Spills:</u> Shut off leak if possible and safe to do so. Wear a self-contained breathing apparatus and appropriate personal protective equipment. Absorb spill with inert material (i.e. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches that lead to waterways.

Small Spills: Absorb spill with inert material (i.e. dry sand or earth), then place in a chemical waste container for proper disposal.

# SECTION 7: HANDLING AND STORAGE

Avoid prolonged or repeated contact with skin, eyes or clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor. Do not reuse this container. Store in a cool dry place, away from heat, sparks or flames. Do not store in direct sunlight.

KEEP OUT OF REACH OF CHILDREN.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION **Exposure Guidelines:** ACGIH TLV OSHA PEL ACGIH STEL OTHER CHEMICAL NAME Naphtha NA NA NA 281 ppm (Exxon) 1000 ppm 1000 ppm Ethanol NA Isopropanol 200 ppm 400 ppm 400ppm 400 ppm 400 ppm Ethyl acetate NA Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air

work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. If vapor concentration exceeds TLV, use NIOSH approved organic vapor cartridge respirator. Wear safety glasses with side shields, goggles and rubber or other chemically resistant gloves when handling this material.

NFPA and HMIS Codes:	NFPA	HMIS
Health	1	1
Flammability	3	3
Reactivity	1	1
Personal Protection	-	В

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:<br/>Odor:<br/>Physical State:<br/>Odor:<br/>Mild hydrocarbon solventSolubility in Water:<br/>Specific Gravity: 0.735 @ 68FPH:<br/>PH:<br/>NAEvaporation Rate:<br/>1.9

 pH:
 NA
 Evaporation Rate: 1.9

 Vapor Pressure:
 43 mmHg @ 68 F (liquid)
 (Butyl acetate=1)

 Viscosity:
 0.9 (Approx.) (Water =1)
 Percent Volatile: 100

Vapor Density: 3.9 (Air 1)

Boiling Point:: 239° F (116C) (initial)

#### SECTION 10: STABILITY AND REACTIVITY

Stability: This product is stable. Conditions to Avoid: Do not use near open flames, red hot surfaces or other sources of ignition.

Incompatibility: Do not mix powdered alkali and alkaline earth metals or strong oxidizing agents.

Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide and incompletely burned hydrocarbons.

Hazardous Polymerization: Will not occur. Conditions to avoid: NA

# SECTION 11: TOXICOLOGICAL INFORMATION

Innalation:			<u>ingestion:</u>		
Ethanol	LC50 rats	20,000 ppm/10 hr	Ethanol	LD50 rats	7060 mg/kg
Ethyl acetate	LC50 rats	$200 \text{gm/m}^3$	Ethyl acetate	LD50 rats	5620 mg/kg
Isopropanol	LC50 rats	12,000 ppm/8 hrs	Isopropanol	LD50 rats	5,800mg/kg
			Naphtha*	LD50 rats	>5000 mg/kg
Skin:			Eyes:		
Isopropanol	rabbit	MLD	Isopropanol	rabbit	SL-MOD
Ethanol	rabbit	400 mg open MLD	Ethanol	rabbit	500 mg SEV
Ethyl acetate	LD50 rabbit	>20 mL/kg			

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Naphtha\* LD50 rabbit >3.16 g/kg

\*Information from manufacturer

Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

Reproductive effects: none Teratogenic effects: none Mutagenic effects: none

# SECTION 12: ECOLOGICAL INFORMATION

### **Environmental Impact Information**

Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

**REPORTING** US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is: 1-800-424-8802

# SECTION 13: DISPOSAL CONSIDERATION

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTIO	N 14: TRANSPORTATION INFO Proper Shipping Name	ORMATION <u>UN Number</u>	Hazard <u>Class</u>	Sub. <u>Risk</u>	Pkg. <u>Group</u>	Hazard <u>Label</u>	Pkg. <u>Instr.</u>	Max. Quantity
Air:	Flammable liquids, n.o.s. (Naphtha solution)	UN 1993	3	NA	II	Flammable Liquid	305	5L
Ground:	Consumer Commodity ORM-D	ORM-D	NA	NA		ORM-D	Pkg. Auth.	173.150

# SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION This product contains no toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To- Know Act of 1986 (40 CFR 372).

This information should be included on all MSDSs copied and distributed for this material.

TOXIC SUBSTANCES CONTROL ACT (TSCA). All ingredients of this product are listed on the TSCA Inventory.

WHMIS: Class B3; Class D2B

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

# SECTION 16: OTHER INFORMATION

Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.