

MATERIAL SAFETY DATA SHEET



Date-Issued:07/28/2003
MSDS Ref. No:03381F
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Revision No:3

#381F Liquid Flux

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: #381F Liquid Flux
PRODUCT DESCRIPTION: No Clean Liquid Flux

MANUFACTURER

Qualitek International, Inc.
315 Fairbank St.
Addison, IL 60101
Product Information: (630) 628-8083

24 HR. EMERGENCY TELEPHONE NUMBERS

Emergency Phone: (800) 505-5053

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
2-Propanol	<88	67-63-0	200-661-0
Stoddard solvent	<11	8052-41-3	232-489-3

EEC LABEL SYMBOL AND CLASSIFICATION



EEC Highly flammable - "F"



EEC Irritant - "Xi"

COMMENTS: This product contains no other hazardous ingredients in concentrations greater than 1 %, and it contains no other ingredients that are considered hazardous according to 29 CFR 1910.1200. This product contains no other hazardous ingredients in concentrations greater than 1 %, and it contains no other ingredients that are considered hazardous according to 29 CFR 1910.1200.

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: Irritating, and may injure eye tissue if not removed promptly.

SKIN: Frequent or prolonged contact may irritate the skin and cause a skin rash (dermatitis).

INGESTION: May cause nausea, vomiting, and gastrointestinal irritation.

INHALATION: May be irritating to the mucous membranes and to the respiratory tract.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Stinging, tearing, redness, and swelling.

SKIN: Redness, burning, drying, cracking and rash.

INGESTION: Nausea, vomiting, impaired coordination, diarrhea, dizziness, drowsiness, weakness, fatigue, headache and loss of consciousness.

CARCINOGENICITY: This product contains no components at concentrations of 0.1 percent or greater that are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

4. FIRST AID MEASURES

EYES: Remove any contact lenses. Immediately flush eyes with large quantities of water for at least 15 minutes. Get immediate medical attention.

SKIN: Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get medical attention as soon as possible.

INGESTION: If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

INHALATION: If symptoms of overexposure are experienced, evacuate to fresh air. If symptoms persist, seek medical attention.

NOTES TO PHYSICIAN: If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered. Metabolism of isopropanol forms acetone, which may be detected in the urine or expired air. In contrast to diabetic acidosis, acidosis will occur in the absence of hyperglycemia. Hemodialysis should be considered in severe acute intoxications.

COMMENTS: If victims of chemical over-exposure are taken for medical attention, give a copy of the label or this MSDS to the physician/health care professional.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 12°C (53°F)

FLAMMABLE LIMITS: 2.5 % to 12.0 %

AUTOIGNITION TEMPERATURE: 456°C (852°F)

GENERAL HAZARD: Flammable Liquid. Can release vapors that form flammable mixtures at temperatures at or above the flash point. Empty containers retain product residue (liquid and/or vapor). DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

EXTINGUISHING MEDIA: Alcohol foam, carbon dioxide, or dry chemical.

HAZARDOUS COMBUSTION PRODUCTS: May include carbon monoxide and carbon dioxide.

FIRE FIGHTING PROCEDURES: Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam. Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.

FIRE FIGHTING EQUIPMENT: Self contained breathing apparatus and full protective turn-out gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. Consult an expert on disposal of recovered materials and ensure conformity to local disposal regulations.

LARGE SPILL: If in public area, keep public away and advise authorities. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent. Consult Section 13 for disposal information.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: In the event of a water spill, eliminate all sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request that all stay clear.

LAND SPILL: In the event of a land spill, prevent liquid from entering sewers, watercourses, or low areas.

7. HANDLING AND STORAGE

HANDLING: Keep container closed. Handle and open containers with care. DO NOT handle near an open flame, heat, or other sources of ignition. DO NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. DO NOT reuse empty containers without commercial cleaning or reconditioning.

STORAGE: Store in a cool, well ventilated place away from incompatible materials. Do not store near an open flame, heat, or other

source of ignition. Protect materials from direct sunlight.

ELECTROSTATIC ACCUMULATION HAZARD: Use proper grounding and bonding procedures when transferring material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
2-Propanol	TWA	400	980	400	983	NL ^[1]	NL
	STEL	500	1225	500	1230	NL	NL
Stoddard solvent	TWA	100	525	100	525	NL	NL
	STEL	NL	NL	NL	NL	NL	NL

OSHA TABLE COMMENTS:

1. NL = Not Listed

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the OSHA/ACGIH exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear splash goggles or glasses with face shield.

SKIN: Neoprene rubber gloves, impermeable gloves, cuffed butyl-rubber gloves, or nitrile rubber gloves.

RESPIRATORY: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures and/or without sufficient ventilation, use a NIOSH/MSHA approved air-purifying respirator.

PROTECTIVE CLOTHING: Protective clothing and safety shoes as necessary to minimize contact.

WORK HYGIENIC PRACTICES: Good personal hygiene practices should be used. Wash after any contact, before eating, and at the end of the work period.

OTHER USE PRECAUTIONS: Eye wash station and quick drench safety shower in immediate work area.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Mild ethereal odor.

APPEARANCE: Liquid

COLOR: Light colored.

VAPOR PRESSURE: 33.00 mmHg at 20°C (68°F)

VAPOR DENSITY: 2.07 (Air=1)

BOILING POINT: 82°C (180°F)@ 760 mmHg

SOLUBILITY IN WATER: Partially Soluble

EVAPORATION RATE: <2.3 (n-Butyl Acetate=1)

SPECIFIC GRAVITY: 0.795 to 0.805

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Ignition sources such as sparks and open flames.

STABILITY: Stable under ordinary use and storage conditions.

POLYMERIZATION: Will not occur under normal use and storage conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: May emit toxic fumes of carbon monoxide and carbon dioxide.

INCOMPATIBLE MATERIALS: Strong oxidizing materials and strong bases.

11. TOXICOLOGICAL INFORMATION

GENERAL COMMENTS: No toxicological information available at this time.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: May be dangerous if water supply is contaminated by this product. Notify officials if entrance occurs.

GENERAL COMMENTS: No information on ecological toxicity or biodegradability is available at this time.

13. DISPOSAL CONSIDERATIONS

GENERAL COMMENTS: This substance, when discarded or disposed of, could be hazardous waste according to Federal regulations (40 CFR 261) due to its characteristic of ignitability (D001). The transportation, storage, and disposal of this waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Disposal can occur only in properly permitted facilities. Check state and local regulations for any additional requirements, as these may be more restrictive than federal laws and regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in the MSDS incomplete, inaccurate or otherwise inappropriate.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquid, N.O.S.

TECHNICAL NAME: Contains Isopropanol

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

PLACARDS: Flammable Liquid

LABEL: Flammable Liquid

15. REGULATORY INFORMATION

UNITED STATES

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All ingredients are listed or are exempt from listing (as polymers) on the Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

CANADA

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): WHMIS Hazardous Ingredients: 2-Propanol

WHMIS CLASS: Class B Division 2, Class D Division 2B

INTERNATIONAL COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION



Highly flammable (R-11)
Keep away from sources of ignition - No smoking (S-16)

EEC Highly flammable - "F"



Irritating to eyes (R-36)
Vapors may cause drowsiness and dizziness (R-67)
Avoid contact with skin (S-24) and eyes (S-25)
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice (S-26)

EEC Irritant - "Xi"

CALIFORNIA PROPOSITION 65: When used for soldering and similar applications chemicals may be produced which are known

to some states to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

HMIS RATING

HEALTH:	2
FLAMMABILITY:	3
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	C

MANUFACTURER DISCLAIMER: The information contained herein is based upon data considered to be accurate and is offered solely for information, customer consideration and investigation. The manufacturer extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The content of this Material Safety Data Sheet relates only to this product as sold and does not relate to use with any other material or in any process. All chemical products should be used only by, or under, the direction of technically qualified personnel, who are aware of the hazards involved and of the necessity for reasonable care in handling. Hazard communication regulations, United States Occupational Health and Safety (OSHA) and Canadian Workplace Hazardous Materials Information System (WHMIS) require that employees must be trained in the use of Material Safety Data Sheets as a source of hazards information and response.

PREPARED BY: B. Backes

APPROVED BY: Tippy Wicker **TITLE:** Director of Product Development

INFORMATION CONTACT: (630) 628-8083

REVISION SUMMARY Revision #: 3

This MSDS replaces the August 13, 2003 MSDS. Any changes in information are as follows:
In Section 3
Carcinogenicity