



No-Clean Flux Dispensing Pen

Trace Technologies™
2507

Introduction

The No-Clean Flux Dispensing Pen is designed to dispense no-clean flux in the high precision applications of prototype and rework/repair of printed circuit boards. The resin and halide-free no-clean flux will leave no residues. It provides optimum wetting over a wide range of surfaces and will not damage commonly used plastics.

Features / Benefits

- Excellent Wetting Abilities
- Pen Tip Allows Accurate Application
- Excellent for Surfaces with Poor Solderability

Chemical Components

Isopropanol.....	(67-63-0)	90-100%
Adipic Acid.....	(124-04-9)	2-3%

Environmental Policy

Techspray® is committed to developing products to ensure a safer and cleaner environment. We will continue to meet and sustain the regulations of all federal, state and local government agencies.

Packaging and Availability

No-Clean Flux Dispensing Pen is available in the following sizes:

2507-N	1 11.5ml Pen
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Resources

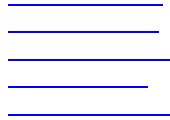
Techspray® products are supported by a global sales, technical and customer services resources.

For additional technical information on this product or other Techspray® products in the United States, call the technical sales department at 800-858-4043, email tsales@techspray.com or visit our web site at: www.techspray.com.

Important Notice to Purchaser/User: The information in this publication is based on tests that we believe are reliable. The results may vary due to differences in tests type and conditions. We recommend that each user evaluate the product to determine its suitability for the intended application. Conditions of use are outside our control and vary widely. Techspray's only obligation and your only solution is replacement of product that is shown to be defective when you receive it. In no case will Techspray® be liable for any special, incidental, or consequential damages based on breach of warranty, negligence or any other theory.



Tech Spray, L.P.
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MATERIAL SAFETY DATA SHEET

Finished Product



Date-Issued: 01/18/2003
MSDS Ref. No: 2507-N
Date-Revised: 06/08/2004
Revision No: 2

Trace Technologies No-Clean Flux Dispensing Pen

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Trace Technologies No-Clean Flux Dispensing Pen

PRODUCT DESCRIPTION: Flux Dispensing Pen

PRODUCT CODE: 2507/CAN/EUR-N

MANUFACTURER

Techspray, L.P.
1001 N.W. 1st Street
P.O. Box 949
Amarillo, TX 79107
Contact: Chemtrec
Product Stewardship: 1-800-858-4043

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (U.S.): (800) 424-9300
CANUTEC: (613) 996-6666
Emergency Phone: 1-800-858-4043

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
2-Propanol	90 - 100	67-63-0	200-661-0
Non-ionic flux mixture (Proprietary non-hazardous blend)	1 - 10		NIF

EEC LABEL SYMBOL AND CLASSIFICATION



R11 - Highly flammable.

EEC Highly flammable - "F"



R36/38 - Irritating to eyes and skin.

EEC Irritant - "Xi"



R52 - Harmful to aquatic organisms.

EEC Environment - "N"

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Transparent, colorless liquid.

IMMEDIATE CONCERNS: Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract. Causes skin irritation. Harmful if swallowed.

POTENTIAL HEALTH EFFECTS

EYES: Avoid contact with eyes; may cause redness, irritation and conjunctivitis.

SKIN: Prolonged or repeated skin contact may cause irritation.

INGESTION: Ingestion of large amounts may produce abdominal pain, nausea and vomiting. Swallowing small amounts is not likely to produce harmful effects.

INHALATION: Prolonged or excessive inhalation may cause respiratory tract irritation.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Liquid splashed in the eye may cause redness, irritation and conjunctivitis.

SKIN: Prolonged or exposure may cause skin irritation.

INGESTION: For large amounts; abdominal pain, nausea and vomiting.

INHALATION: High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

ACUTE TOXICITY: Low hazard for usual industrial or commercial handling.

CARCINOGENICITY: NOT listed

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Established

TERATOGENIC EFFECTS: Not considered a developmental toxicant.

TARGET ORGAN STATEMENT: Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.

CANCER STATEMENT: NOT listed

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

INGESTION: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but do not induce. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Call a physician immediately.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (53°F)TAG CC

FLAMMABLE LIMITS: 2.0 to 12.0

GENERAL HAZARD: Vapors can travel to a source of ignition and flash back.

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

HAZARDOUS COMBUSTION PRODUCTS: Smoke, fumes and oxides of carbon.

FIRE FIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Contain spill with dike to prevent entry into sewers.

LARGE SPILL: Clean up spills immediately, observing precautions in Protective Equipment section.

GENERAL PROCEDURES: Dike area to contain spill. Take precautions as necessary to prevent contamination of ground and surface waters. Recover spilled material on adsorbent, such as sawdust or vermiculite, and sweep into closed containers for disposal. After all visible traces, including vapors, have been removed thoroughly wet vacuum the area. Do not flush to sewer. If area of spill is porous, remove as much contaminated earth, gravel, etc. as necessary and place in closed containers for disposal.

SPECIAL PROTECTIVE EQUIPMENT: Only personnel equipped with proper respiratory and skin/eye protection should be permitted in area. See Section 8 for details.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Wash thoroughly after handling. Use only in a well ventilated area. Store in a cool dry place.

HANDLING: Use with sufficient ventilation to keep employee exposure below recommended limits. Provide adequate ventilation for storage, handling and use, especially for enclosed or low spaces. Avoid contact of liquid

with eyes and prolonged skin exposure. Do not allow product to contact open flame or electrical heating elements because dangerous decomposition products may form.

STORAGE: Store away from heat.

STORAGE PRESSURE: Store at local atmospheric pressure.

STORAGE TEMPERATURE: Store in a cool place below (120) F (49) C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	<u>EXPOSURE LIMITS</u>						
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>		
	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	
2-Propanol	TWA	400	980	400	983	NL ^[1]	NL
	STEL	500	1225	500	1230	NL	NL

OSHA TABLE COMMENTS:

1. NL = Not Listed

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

SKIN: The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection.

Viton, Solvex, Butyl, Buna, Neoprene.

Butyl Rubber

Solvex

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Wash hands before eating and wash before reuse.

OTHER USE PRECAUTIONS: Emergency shower and eyewash facility should be in close proximity.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Alcohol odor

APPEARANCE: Clear, Colorless liquid

PERCENT VOLATILE: 100

VAPOR DENSITY: 2.1 (Air=1)

BOILING POINT: to 80°C (176°F)

SOLUBILITY IN WATER: WT %

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Heat, flames, ignition sources, and incompatibles.

STABILITY: Stable.

POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide and carbon Monoxide may form when heated to decomposition.

INCOMPATIBLE MATERIALS: Strong acids and alkalis, reactive metals and strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: 12800 mg/kg (rabbit)

ORAL LD₅₀: 5045 mg/kg (rat)

INHALATION LC₅₀: Slight to very low toxicity.

Fumes/liquid -- Irritant

EYE EFFECTS: Mixture is a moderate eye irritant.

CARCINOGENICITY:

IARC: NOT listed

NTP: NOT listed

OSHA: NOT listed

MUTAGENICITY: Collective data indicate non-mutagenic.

REPRODUCTIVE EFFECTS: NOT listed

NEUROTOXICITY: Not Established

TERATOGENIC EFFECTS: Not Available

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: There is limited information available on the environmental fate and effects of this material. The primary environmental concern for release is the impact on aquatic and terrestrial species. Due care should be taken to avoid the accidental release of this material into the environment.

ECOTOXICOLOGICAL INFORMATION: Isopropyl alcohol has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Federal, State, and Local laws governing disposal of materials can differ. Ensure compliance with proper authorities before disposal.

FOR LARGE SPILLS: Contaminated sawdust, vermiculite, or porous surfaces must be disposed of in a permitted hazardous waste management facility. Recovered liquids may be reprocessed or incinerated or must be treated in a permitted hazardous waste management facility.

GENERAL COMMENTS: Dispose of in a manner consistent with federal, state, and local regulations.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Nonhazardous

UN/NA NUMBER: N/A

PACKING GROUP: N/A

OTHER SHIPPING INFORMATION: "THIS PACKAGE CONFORMS TO 49CFR 173.4." must be on package.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Nonhazardous

PRIMARY HAZARD CLASS/DIVISION: 9

UN/NA NUMBER: ID8000

PACKING GROUP: N/A

IATA NOTE: Domestic shipments only. When shipping International contact TechSpray shipping department.

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: ISOPROPANOL

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN1219

PACKING GROUP: II

IMDG NOTE: Page 3244

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: IMMEDIATE / DELAYED

**FIRE: YES PRESSURE GENERATING: NO REACTIVITY: NO ACUTE: YES
CHRONIC: NO**

313 REPORTABLE INGREDIENTS: 2-propanol (CAS #67-63-0)

TITLE III NOTES: Not listed as an Extremely Hazardous Substance.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All components of this product are either listed or exempt from listing in the TSCA inventory.

RCRA STATUS: D001

OSHA HAZARD COMM. RULE: Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS

CHEMICALS: None of the chemicals in this product are considered highly hazardous by OSHA.

CANADA

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

WHMIS CLASS: Class B2 - Flammable Liquids. Class D2B - Toxic Materials.

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION



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R52 - Harmful to aquatic organisms.

CALIFORNIA PROPOSITION 65: This product does not contain any chemicals known to the State of California to cause cancer.

16. OTHER INFORMATION

APPROVED BY: Pierce A. Pillon **TITLE:** Chemist

REVISION SUMMARY Revision #: 2

This MSDS replaces the September 08, 2003 MSDS. Any changes in information are as follows:

In Section 9

Specific Gravity (Unit)

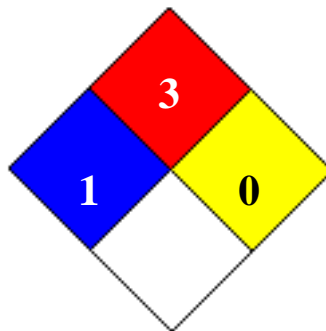
In Section 15

EEC Risk Phrase Codes

HMIS RATING

HEALTH:		1
FLAMMABILITY:		3
PHYSICAL HAZARD:		0
PERSONAL PROTECTION:		

NFPA CODES



DATA SOURCES: Code of Federal Regulations (CFR)
The Sigma-Aldrich Library of Regulatory and Safety Data
OSHA Hazard Communication Standard (29CFR1910.1200)
Various Federal, State and Local Regulations

MANUFACTURER DISCLAIMER: To the best of our knowledge, the information contained herein is accurate. However, neither Tech Spray, L.P., or any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.