



Overcoat Pen - Green

Trace Technologies®
2509

Introduction

The Overcoat Pen was designed to insulate printed circuit board traces and components against high voltage arcing. It also provides protection from moisture and fungus. The pen configuration is useful for rework and repair when precision application is necessary. Formulated with OptiScan™ for black light inspection.

- Features / Benefits
- Protects Conductive Pen Traces
 - Repairs Permanent Solder Mask
 - Prevents Shorting and Arcing

Chemical Components

Acetone.....	(67-64-1)	22-26%
Acrylic Polymer Blend.....		28-32%
n-Propyl Acetate.....	(109-60-4)	43-47%
Dye.....		<1%

Cure Type	Thermal
Meets/Exceeds IPC-CC-830 MIL-I-46058C	AR Acrylic
Thermal Shock	2
Dielectric Constant (@ 10 ⁶ Hz)	3.1
Dielectric Strength (Volts/Mill)	2086
Volume Resistivity	4x10 ¹³ Dry
Moisture Resistance	2
Resistant to Fungus	Yes
Ease of Repair	2
Flexibility	2
Chemical Resistance	1
Dry Time to Touch	15 min.
Cure Time	24 Hours
Accelerated Cure Time	20 min. @ 120°F 30 min. @ 180°F Two Step Process
Removal (2510-P or 2510-N)	1-5 min.
Burn Through	Yes

Ratings: 5 (Excellent), 4 (Very Good), 3 (Good), 2 (Fair), 1 (Poor)

Typical Physical Properties for 2509

% Non Volatile	20
Gardner Color	1 Max
Acid Value (g KOH/g Acid)	4.3 – 4.9
Tg 2 (C)	43.5 – 46.5
MFI (g/10 min.)	19 @ 190°C
Molecular Weight	90,000
Viscosity (cps) Bulk	34-54

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

Overcoat Pen is available in the following sizes:

2509-GN 1 5ml Pen Green

MATERIAL SAFETY DATA SHEET

Finished Product

MSDS Ref. No: 2509-GN

Trace Technologies Overcoat Pen (Green)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Trace Technologies Overcoat Pen (Green)**PRODUCT DESCRIPTION:** Circuit Board Insulating Pen**PRODUCT CODE:** 2509/CAN/EUR-GN

MANUFACTURER

Techspray, L.P.

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>	<u>EINECS#</u>
Acetone	25 - 35	67-64-1	200-662-2
n-Propyl acetate	50 - 60	109-60-4	2036861
Acrylic Polymer (non-hazardous)	15 - 25		

EEC LABEL SYMBOL AND CLASSIFICATION



R11 - Highly flammable.

EEC Highly flammable - "F"

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: Sweet ester odor.

APPEARANCE: Clear, Colorless liquid

PERCENT VOLATILE: 79 at 20°C (68°F)

VAPOR DENSITY: >1 (Air=1)

BOILING POINT: to 110°C (230°F)

SOLUBILITY IN WATER: Insoluble

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: 2000 mg/kg (rabbit)

ORAL LD₅₀: 5800 mg/kg (rat)

INHALATION LC₅₀: 50100 ppm, 8-hour

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.

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: YES

313 REPORTABLE INGREDIENTS: Acetone (CAS# 67-67-1)

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

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA REGULATORY: Acetone (67-64-1)

CERCLA RQ: 5000 lbs

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: U002 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.

EUROPEAN COMMUNITY

EEC LABEL SYMBOL AND CLASSIFICATION



R11 - Highly flammable.

EEC Highly flammable - "F"



R20/21 - Harmful by inhalation and in contact with skin.

EEC Harmful - "Xn"

R36 - Irritating to eyes.