



# Fine-L-Kote™ HT

## High Temperature Conformal Coating

### 2106

#### Introduction

A silicone resin, conformal coating designed to withstand extreme temperatures. Exhibiting excellent adhesion properties, moisture and fungus resistance, temperature stability and solvent resistance, Fine-L-Kote™ HT coating offers complete versatility. Coating is formulated with a black light indicator, Opti/Scan™, to provide checks for conformity in quality control. Complete removal can be achieved by using Trace Technologies™ Conformal Coating Remover (2510-N, 2510-P).

#### Features / Benefits

- Silicone Based
- Withstands Extreme Temperatures (-40°F to 662°F / -40°C to 350°C)
- Non-Ozone Depleting
- Flexible
- Contains Opti/Scan™

#### Chemical Components

Xylene.....	(1330-20-7)	42-48%-Aerosol <25%-Bulk
Polymethylphenyl Silicone Resin.....	(110775-80-9)	10-15%
Aerosol-Optical Brightener		<.2%
Aerosol-Tetrafluoroethane.....	(811-97-2)	32-39%
Aerosol-Isobutyl Alcohol.....	(78-83-1)	<4%
Toluene.....	(108-88-3)	4-7%-Aerosol <70%-Bulk
Bulk-High Temp. Silicone Polymer		<15%

Cure Type	Thermal
Meets/Exceeds IPC-CC-830 MIL-I-46058C	SR Silicone
Thermal Shock	5
Dielectric Constant (@ 10 <sup>6</sup> Hz)	2.5
Dielectric Strength (Volts/Mill)	560
Volume Resistivity	5x10 <sup>13</sup>
Moisture Resistance	5
Resistant to Fungus	Yes
Ease of Repair	5
Flexibility	5
Chemical Resistance	2
Dry Time to Touch	45 min.
Cure Time	24 Hours
Accelerated Cure Time	15 min. @ 120°F One Step Process
Removal (2510-P or 2510-N)	1-5 min.
Burn Through	Yes
Viscosity (cps) for Bulk	10-30

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

## Environmental Policy

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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

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Fine-L-Kote™ HT may be ordered in the following container sizes:

2106-12S	12 Ounce Aerosol
2106-G	1 Gallon in Metal
2106-5G	5 Gallons in Metal

## FINE-L-KOTE™ COATING SELECTION CHART

Fine-L-Kote™ Part Number	2102	2103	2104	2106
Cure Type	Thermal	Thermal	Thermal	Thermal
Meets / Exceeds IPC-CC-830 MIL-I-46058C	SR Silicone	AR Acrylic	UR Urethane	SR Silicone
Thermal Shock	5	2	3	5
Dielectric Constant (@ 10 <sup>6</sup> Hz)	2.66	3.1	3.80	2.5
Dielectric Strength (Volts / Mil)	1100 Dry 976 Wet	2086	380	560
Volume Resistivity	1x10 <sup>14</sup> Dry 9x10 <sup>14</sup> Wet	4x10 <sup>13</sup> Dry	2x10 <sup>13</sup>	5x10 <sup>13</sup>
Moisture Resistance	5	2	4	5
Resistant to Fungus	Yes	Yes	Yes	Yes
Ease of Repair	3	5	2	3
Flexibility	5	2	3	5
Chemical Resistance	4	1	4	2
Dry Time To Touch	1 Hour	15 Min.	15 Min.	45 Min.
Cure Time	72 Hours	24 Hours	24 Hours	24 Hours
Accelerated Cure Time	30 min. @ 90°F 45 min. @ 200°F Two Step Process	20 min. @ 120°F 30 min. @ 180°F Two Step Process	20 min. @ 120°F 30 min. @ 180°F Two Step Process	15 min. @ 120°F One Step Process
*Removal (2510)	1-5 min.	1-5 min.	1-5 min.	1-5 min.
Burn Through	Yes	Yes	Yes	Yes

Ratings: 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Fair, 1 - Poor  
All coatings may be thinned by using Fine-L-Kote™ UR Thinner (2105)

\* Available: Conformal Coating Remover  
Product #'s: 2510-P and 2510-N

**MOISTURE RESISTANT**



2102  
2106

**THERMAL RESISTANT**



2102  
2106

**CHEMICAL RESISTANT**



2102  
2104

**STATIC RESISTANT**



2103

For Commercial Use Only  
Copyright 2004 Tech Spray, L. P.

# MATERIAL SAFETY DATA SHEET

**Finished Product**

MSDS Ref. No : 2106-12S

**Fine-L-Kote HT**

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Fine-L-Kote HT**PRODUCT DESCRIPTION:** Silicone Conformal Coating**PRODUCT CODE:** 2106/CAN/EUR-12S

## MANUFACTURER

Techspray, L.P.

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Content</u>	<u>CAS</u>	<u>EINECS</u>
Xylenes (o-,m-,p- isomers)	30 - 60	1330-20-7	
Polysiloxane mixture	13 - 24		
1,1,1,2-Tetrafluoroethane (HFC-134a)	20 - 40	811-97-2	223770

## 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"

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

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## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** (40°F)TAG CC

**FLAMMABLE LIMITS:** Not Established to Not Established

**GENERAL HAZARD:** Flammable Liquid. Can release vapors that form explosive mixtures at temperatures at or above the flash point.

**EXTINGUISHING MEDIA:** Water, foam, dry chemical, carbon dioxide.

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

**EXPLOSION HAZARDS:** Vapors may form explosive mixture with air.

**FIRE FIGHTING PROCEDURES:** Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

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

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## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** 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 ignitable 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 and gravel, etc. as necessary and place in closed containers for disposal.

### ENVIRONMENTAL PRECAUTIONS

**WATER SPILL:** NEVER FLUSH TO SEWER.

**GENERAL PROCEDURES:** Absorb the liquid and scrub the area with detergent and water.

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## 7. HANDLING AND STORAGE

**HANDLING:** Empty containers will retain product residue and vapor and should be handled as if they were full.

**STORAGE:** Store in a cool place in original container and protect from sunlight.

**STORAGE PRESSURE:** Store at local atmospheric pressure.

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

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

#### OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>					
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>	<u>ppm</u>	<u>mg/m<sup>3</sup></u>
Xylenes (o-,m-,p- isomers)	<b>TWA</b>	435 mg/ m3		434 mg/ m3		
	<b>STEL</b>	150 ppm		651 mg/ m3		
Polysiloxane mixture						
1,1,1,2-Tetrafluoroethane (HFC-134a)	<b>TWA</b>	NE		NE		1,000 ppm <sup>[1]</sup>

### OSHA TABLE COMMENTS:

1. \* (AEL)=Acceptable Exposure Limit as established by the manufacture

**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:** Wear safety glasses with side shields (or goggles) and a face shield.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**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:** Aromatic odor.

**APPEARANCE:** Clear water-white viscous liquid with aromatic odor.

**COLOR:** Colorless

**PERCENT VOLATILE:** 80

**VAPOR DENSITY:** > 1 (Air=1)

**BOILING POINT:** 110°C (230°F)

**FREEZING POINT:** Not Determined

**SOLUBILITY IN WATER:** Insoluble

**EVAPORATION RATE:** Not Established

**DENSITY:** 0.92

**(VOC):** 724 g/L (non-exempt VOC)

**CERCLA REGULATORY:** Contains xylene (#1330-20-7).

**CERCLA RQ:** 100 lbs.

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

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

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

**CLEAN AIR ACT**

**40 CFR PART 68---RISK MANAGEMENT FOR CHEMICAL ACCIDENT RELEASE PREVENTION:** Xylenes (CAS# 1330-20-7)

**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 (WORKPLACE 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.

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

**GENERAL COMMENTS:** 1,1,1,2-tetrafluoroethane is subject to U.S. Environmental Agency Clean Air Act Regulations, (40CFR Part 82).

**COMMENTS: WARNING:** Contains 1,1,1,2-tetrafluoroethane (HFC-134a), a greenhouse gas which may contribute to global warming.