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Revised 5/05/03
Replaces 1/10/01
Printed 5/21/03
MSDS ID: FT004RCLF

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: LEAD FREE ROSIN CORE WIRE (RA,RMA,RSA,NC)
LEAD FREE ROSIN PASTE

MANUFACTURER'S NAME: COOKSON ELECTRONICS ASSEMBLY MATERIALS GROUP
ADDRESS: 4100 6th AVENUE
ALTOONA, PA 16602
TRANSPORT EMERGENCY #: CHEMTREC: 1-800-424-9300
BUSINESS PHONE: 1-814-946-1611

2. INGREDIENT AND EXPOSURE LIMIT INFORMATION

CHEMICAL NAME	CAS #	% W/W	OSHA PEL - TWA
TIN	7440-31-5	0 - 99.5	2.0mg/m3
SILVER	7440-22-4	0 - 25	0.01mg/m3
ANTIMONY	7440-36-0	0 - 40	0.5mg/m3
BISMUTH	7440-69-9	0 - 60	N/E
COPPER	7440-50-8	0 - 20	0.1mg/m3 (fume) 1.0 mg/m3 (dusts & mists as CU)
GOLD	7440-57-5	0 - 80	N/E
WW GUM ROSIN *	8050-09-7	1 - 4	N/E
PROPYLENE GLYCOL ETHER	1589-47-5	1 - 4	100PPM
TETRAHYDROFURFURYL ALCHOL	97-99-4	1 - 4	2PPM
RESIN H *	65997-06-0	1 - 4	N/E

PRODUCT CONTAINS ONE OR MORE OF THE ABOVE LISTED CHEMICALS IN VARYING PERCENTAGES. SEE PRODUCT LABEL FOR EXACT COMPOSITION.

*SENSITIZER REDUCE EXPOSURE TO AS LOW AS POSSIBLE

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: MODERATE EYE IRRITANT. WILL NOT BURN. TOXIC BY INHALATION. GASTROINTESTINAL TRACT IRRITANT. RESPIRATORY TRACT IRRITANT. CAUSES SKIN IRRITATION.

HMS RATING SYSTEM:
Health: 2 ; Flammability: 0 ; Reactivity: 0 ; Protection: B

NFPA RATING SYSTEM:
Health: 2 ; Flammability: 0 ; Reactivity: 0

ROUTES OF ENTRY: INHALATION; INGESTION; SKIN CONTACT; EYE CONTACT;
ABSORPTION.
TARGET ORGANS: BLOOD; DIGESTIVE TRACT; KIDNEYS; NERVOUS SYSTEM

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3. HAZARDS IDENTIFICATION (Cont.)

MEDICAL CONDITIONS AGGRAVATED: DIGESTIVE TRACT DISEASE; KIDNEY DISEASE

IMMEDIATE (ACUTE) SYMPTOMS OVER-EXPOSURE BY ROUTE OF EXPOSURE:
INHALATION: CAN CAUSE MODERATE RESPIRATORY IRRITATION, DIZZINESS,
WEAKNESS, FATIGUE, NAUSEA AND HEADACHE.
EYES: CAN CAUSE MODERATE IRRITATION, TEARING AND REDDENING, BUT
NOT LIKELY TO PERMANENTLY INJURE EYE TISSUE.
SKIN CONTACT: CAN CAUSE SLIGHT IRRITATION.
INGESTION: IRRITATING TO MOUTH, THROAT, AND STOMACH. CAN CAUSE
ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

LONG TERM (CHRONIC) HEALTH EFFECTS:
CARCINOGENICITY: AT THIS TIME CADMIUM IS A SUSPECTED HUMAN CARCINOGEN BY THE
NTP, IARC, OR OSHA.

REPRODUCTION: SEE SECTION 11 OF THE MSDS FOR ADDITIONAL INFORMATION
MUTAGENICITY: SEE SECTION 11 OF THIS MSDS.
SEE SECTION 11 OF THIS MSDS.

4. FIRST AID MEASURES

SKIN EXPOSURE: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND
LAUNDRY. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR
PERSISTS.
EYE EXPOSURE: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 20 MINUTES
RETRACTING EYELIDS OFTEN. TILT THE HEAD TO PREVENT CHEMICAL
FROM TRANSFERRING TO THE UNCONTAMINATED EYE. GET IMMEDIATE
MEDICAL ATTENTION.
INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE A
TRAINED INDIVIDUAL ADMINISTER OXYGEN. IF NOT BREATHING, GIVE
ARTIFICIAL RESPIRATION AND HAVE A TRAINED INDIVIDUAL
ADMINISTER OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY
INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY.
NOTES TO DOCTOR: NO ADDITIONAL FIRST AID INFORMATION AVAILABLE

5. FIRE FIGHTING MEASURES

FLAMMABILITY SUMMARY: NOT COMBUSTIBLE
FLASH POINT: N/A
AUTOIGNITION TEMPERATURE: N/E
EXPLOSIVE LIMITS % IN AIR: N/E

FIRE FIGHTING METHODS: WILL NOT BURN, NO SPECIAL INSTRUCTIONS AVAILABLE.
USE METHODS APPROPRIATE FOR SURROUNDING
MATERIALS.

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5. FIRE FIGHTING MEASURES (Cont.)

HAZARDOUS COMBUSTION PRODUCTS: METAL FUMES; TOXIC FUMES.

6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONS AND EQUIPMENT: EXPOSURE TO THE SPILLED MATERIAL MAY BE IRRITATING OR HARMFUL. FOLLOW PERSONAL PROTECTIVE EQUIPMENT RECOMMENDATIONS FOUND IN SECTION VIII OF THIS MSDS.

METHODS FOR CLEAN-UP: WEAR COMPLETE AND PROPER PERSONAL PROTECTIVE EQUIPMENT FOLLOWING THE RECOMMENDATION OF SECTION VIII GATHER AND STORE IN A SEALED CONTAINER PENDING A WASTE DISPOSAL EVALUATION. DO NOT USE BROOM OR AIR CLEANING ETC.

7. HANDLING AND STORAGE

HANDLING MEASURES: HARMFUL OR IRRITATING MATERIAL. AVOID CONTACTING AND AVOID BREATHING THE MATERIAL. USE ONLY IN A WELL VENTILATED AREA.

AS WITH ALL CHEMICALS, GOOD INDUSTRIAL HYGIENE PRACTICES SHOULD BE FOLLOWED WHEN HANDLING THIS MATERIAL. AVOID CONTACT WITH MATERIAL, AVOID BREATHING DUSTS OR FUMES, USE ONLY IN A WELL VENTILATED AREA. WASH THOROUGHLY AFTER HANDLING; WASH HANDS BEFORE EATING; DO NOT GET IN EYES, ON SKIN AND CLOTHING; MINIMIZE DUST GENERATION AND ACCUMULATION; REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

STORAGE MEASURES: NO SPECIAL REQUIREMENTS
STORE IN A TIGHTLY CLOSED CONTAINER; KEEP AWAY FROM FOOD AND DRINKING WATER. STORE IN A COOL DRY PLACE; KEEP AWAY FROM HEAT, SPARKS, AND FLAME; KEEP UNDER A NITROGEN BLANKET

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

ENGINEERING MEASURES: USE LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO MINIMIZE EXPOSURES AND MAINTAIN OPERATOR COMFORT.
ENGINEERING CONTROLS MUST BE DESIGNED TO MEET THE OSHA CHEMICAL SPECIFIC STANDARD IN 29 CFR 1910.
VENTILATION IS REQUIRED TO MAINTAIN OPERATOR EXPOSURE BELOW PUBLISHED EXPOSURE LIMITS. USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION, OR OTHER ENGINEERING CONTROLS TO CONTROL AIRBORNE LEVELS BELOW

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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (Cont.)

RECOMMENDED EXPOSURE LIMITS; EXPLOSION PROOF EXHAUST VENTILATION SHOULD BE USED. FACILITIES STORING OR USING THIS MATERIAL SHOULD BE EQUIPPED WITH AN EYEWASH AND SAFETY SHOWER.

RESPIRATORY PROTECTION: RESPIRATORY PROTECTION MAY BE REQUIRED TO AVOID OVEREXPOSURE WHEN HANDLING THIS PRODUCT. GENERAL OR LOCAL EXHAUST VENTILATION IS THE PREFERRED MEANS OF PROTECTION. USE A RESPIRATOR IF GENERAL ROOM VENTILATION IS NOT AVAILABLE OR SUFFICIENT TO ELIMINATE SYMPTOMS. FOLLOW A RESPIRATORY PROTECTION PROGRAM THAT MEETS 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS WHENEVER WORK PLACE CONDITIONS WARRANT THE USE OF A RESPIRATOR. WEAR A NIOSH APPROVED RESPIRATOR IF ANY EXPOSURE IS POSSIBLE.

EYE PROTECTION: WEAR CHEMICALLY RESISTANT SAFETY GLASSES WITH SIDE SHIELDS WHEN HANDLING THIS PRODUCT. DO NOT WEAR CONTACT LENSES.

SKIN PROTECTION: WEAR GOGGLES AND A FACE SHIELD WEAR PROTECTIVE GLOVES. INSPECT GLOVES FOR CHEMICAL BREAK-THROUGH AND REPLACE AT REGULAR INTERVALS. CLEAN PROTECTIVE EQUIPMENT REGULARLY. WASH HANDS AND OTHER EXPOSED AREAS WITH MILD SOAP AND WATER BEFORE EATING, DRINKING, AND WHEN LEAVING WORK WHERE CONTACT IS LIKELY, WEAR CHEMICAL RESISTANT GLOVES, A CHEMICAL SUIT, RUBBER BOOTS, AND CHEMICAL SAFETY GOGGLES PLUS A FACE SHIELD

CONTROL PARAMETERS:	-----ACGIH EXPOSURE LIMITS-----		
CHEMICAL NAME	TLV-TWA	STEL	CEILING
TIN	2 mg/m3 TWA		
SILVER	0.1mg/m3		
ANTIMONY	0.5mg/m3 TWA		
BISMUTH	N/E		
COPPER	1 mg/m3		
GOLD	N/E		
WW GUM ROSIN	0.1mg/m3 (as copper fume)		
ROSIN SH	SENSATIZER REDUCE EXPOSURE TO AS LOW AS POSSIBLE		
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9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: GREY
 ODOR: NONE
 pH: N/A



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9. PHYSICAL AND CHEMICAL PROPERTIES (Cont.)

SOLUBILITY IN WATER: NEGLIGIBLE; 0-1%
OTHER PHYSICAL AND CHEMICAL PROPERTIES DEPEND ON ALLOY COMPOSITION.

10. STABILITY AND REACTIVITY

DECOMPOSITION PRODUCTS: METAL FUMES; TOXIC FUMES.
INCOMPATIBLE MATERIALS: PEROXIDES; METALS; STRONG ACIDS; STRONG OXIDIZING AGENTS; STRONG REDUCING AGENTS; ACIDS; CHLORINE; MOISTURE; STRONG ALKALIES
CONDITIONS TO AVOID: NONE KNOWN
CONTAMINATION; CONTACT WITH AIR. CONTACT WITH WATER

11. TOXICOLOGICAL INFORMATION

INHALATION AND INGESTION: INGESTION OF DUST OR FUME MUST BE AVOIDED.
ANTIMONY: ANTIMONY IS TOXIC AND DUST OR FUME CAN CAUSE NASAL SEPTAL ULCERATION AND STOMACH LINING IRRITATION.
TIN: TIN IS NOT REGARDED AS TOXIC BUT EXCESSIVE EXPOSURE CAN CAUSE FEVER, NAUSEA, STOMACH CRAMSPS OR DIARRHEA.
COPPER: COPPER DUST AND FUME AFFECT THE RESPIRATORY SYSTEM, LUNGS SKIN, LIVER AND EYES.
BISMUTH: BISMUTH IS NOT CONSIDERED HAZARDOUS.
SILVER: SILVER MAY CAUSE DISCOLORATION OF EYES AND SKIN (ARGYRIA)

12. ECOLOGICAL INFORMATION

OVERVIEW: ECOLOGICAL HAZARD. IN HIGH CONCENTRATIONS, THIS PRODUCT MAY BE DANGEROUS TO PLANTS AND/OR WILDLIFE.

13. DISPOSAL CONSIDERATIONS

WASTE DESCRIPTION: RETURN TO SUPPLIER TO BE RECYCLED FOR METAL UNIT VALUE. SPENT OR DISCARDED MATERIAL IS PROBABLY A HAZARDOUS WASTE.
DISPOSAL METHODS: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, LOCAL OR PROVINCIAL LAWS AND REGULATIONS.



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14. TRANSPORT INFORMATION

SHIPPING BASIC DESCRIPTION: DOT & IATA: NOT RESTRICTED UNLESS IN FINE PARTICLE SIZE LESS THAN 0.004 INCHES IN DIAMETER. DEPENDS ON ALLOY. CONSULT LABEL OR MANUFACTURER FOR ADDITIONAL INFORMATION.

15. REGULATORY INFORMATION

TSCA STATUS: ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY OF EXISTING CHEMICAL SUBSTANCES.

REGULATED CHEMICALS:

CHEMICAL NAME		REGULATION
SILVER	7440-22-4	SARA 313
ANTIMONY	7440-36-0	SARA 313
COPPER	7440-50-8	SARA 313

16. OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Additionally, Alpha Metals, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.