

Safety Data Sheet

Supply Co. - SOLDER WIRE CORED 95.5SN/4CU/0.5AG ALLOY, RA-32 FLUX

Document Nbr: 084142
Class C Parts IDs -24962-R,-24964-R

SAFETY DATA SHEET

ALPHA

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-----SECTION 1. IDENTIFICATION -----

PRODUCT NAME: SOLDER WIRE CORED 95.5Sn/4Cu/0.5Ag ALLOY, RA-32 FLUX

PRODUCT CODE: M478RA32

PRODUCT TYPE: SOLID.

DATE OF ISSUE/DATE OF REVISION: MAY 15 2015.

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-----SECTION 2. HAZARDS IDENTIFICATION -----

OSHA/HCS STATUS:

THIS MATERIAL IS CONSIDERED HAZARDOUS BY THE OSHA HAZARD COMMUNICATION
STANDARD (29 CFR 1910.1200).

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

SKIN SENSITIZATION: CATEGORY 1

TOXIC TO REPRODUCTION (UNBORN CHILD): CATEGORY 1B

TOXIC TO REPRODUCTION (FERTILITY): CATEGORY 2

GHS LABEL ELEMENTS:

HAZARD PICTOGRAMS:

HEALTH HAZARD

EXCLAMATION MARK

SIGNAL WORD: DANGER

HAZARD STATEMENTS:

MAY CAUSE AN ALLERGIC SKIN REACTION.

MAY DAMAGE THE UNBORN CHILD.

SUSPECTED OF DAMAGING FERTILITY.

PRECAUTIONARY STATEMENTS:

GENERAL:

READ LABEL BEFORE USE. KEEP OUT OF REACH OF CHILDREN. IF MEDICAL ADVICE IS
NEEDED, HAVE PRODUCT CONTAINER OR LABEL AT HAND.

PREVENTION:

OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. DO NOT HANDLE UNTIL ALL SAFETY
PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. USE PERSONAL PROTECTIVE EQUIPMENT
AS REQUIRED. WEAR PROTECTIVE GLOVES. AVOID BREATHING DUST. CONTAMINATED WORK
CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE.

RESPONSE:

IF EXPOSED OR CONCERNED: GET MEDICAL ATTENTION.

IF ON SKIN:

WASH WITH PLENTY OF SOAP AND WATER. WASH CONTAMINATED CLOTHING BEFORE REUSE.

IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ATTENTION.

STORAGE: STORE LOCKED UP.

DISPOSAL:

DISPOSE OF CONTENTS AND CONTAINER IN ACCORDANCE WITH ALL LOCAL, REGIONAL,
NATIONAL AND INTERNATIONAL REGULATIONS.

HAZARDS NOT OTHERWISE CLASSIFIED: NONE KNOWN.

-----SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS -----

SUBSTANCE/MIXTURE: MIXTURE

INGREDIENT NAME	%	CAS NUMBER
TIN	80-100	7440-31-5

COPPER 1-10 7440-50-8

ROSIN/RESIN 1-10

PROPRIETARY ALCOHOL 0.1-1.0

ANY CONCENTRATION SHOWN AS A RANGE IS TO PROTECT CONFIDENTIALITY OR IS DUE TO BATCH VARIATION.

THERE ARE NO ADDITIONAL INGREDIENTS PRESENT WHICH, WITHIN THE CURRENT KNOWLEDGE OF THE SUPPLIER AND IN THE CONCENTRATIONS APPLICABLE, ARE CLASSIFIED AS HAZARDOUS TO HEALTH OR THE ENVIRONMENT AND HENCE REQUIRE REPORTING IN THIS SECTION.

OCCUPATIONAL EXPOSURE LIMITS, IF AVAILABLE, ARE LISTED IN SECTION 8.

-----SECTION 4. FIRST AID MEASURES -----

DESCRIPTION OF NECESSARY FIRST AID MEASURES:

EYE CONTACT:

CHECK FOR AND REMOVE ANY CONTACT LENSES. IMMEDIATELY FLUSH EYES WITH RUNNING

WATER FOR AT LEAST 30 MINUTES, KEEPING EYELIDS OPEN. GET MEDICAL ATTENTION IF IRRITATION OCCURS.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION OR OXYGEN BY TRAINED PERSONNEL. IT MAY BE DANGEROUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESUSCITATION. GET MEDICAL ATTENTION. IF UNCONSCIOUS, PLACE IN RECOVERY POSITION AND GET MEDICAL ATTENTION IMMEDIATELY. MAINTAIN AN OPEN AIRWAY. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND.

SKIN CONTACT:

WASH WITH PLENTY OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CONTAMINATED CLOTHING THOROUGHLY WITH WATER BEFORE REMOVING IT, OR WEAR GLOVES. CONTINUE TO RINSE FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. IN THE EVENT OF ANY COMPLAINTS OR SYMPTOMS, AVOID FURTHER EXPOSURE. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE.

INGESTION:

WASH OUT MOUTH WITH WATER. REMOVE DENTURES IF ANY. REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. IF MATERIAL HAS BEEN SWALLOWED AND THE EXPOSED PERSON IS CONSCIOUS, GIVE SMALL

QUANTITIES OF WATER TO DRINK. STOP IF THE EXPOSED PERSON FEELS SICK AS VOMITING MAY BE DANGEROUS. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. IF VOMITING OCCURS, THE HEAD SHOULD BE KEPT LOW SO THAT VOMIT DOES NOT ENTER THE LUNGS. GET MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF UNCONSCIOUS, PLACE IN RECOVERY POSITION AND GET MEDICAL ATTENTION IMMEDIATELY. MAINTAIN AN OPEN AIRWAY. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED:

POTENTIAL ACUTE HEALTH EFFECTS:

EYE CONTACT: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

INHALATION: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SKIN CONTACT: MAY CAUSE AN ALLERGIC SKIN REACTION.

INGESTION: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

OVER-EXPOSURE SIGNS/SYMPTOMS:

EYE CONTACT: NO SPECIFIC DATA.

INHALATION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

SKIN CONTACT:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

IRRITATION

REDNESS

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

INGESTION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF

NECESSARY:

NOTES TO PHYSICIAN:

TREAT SYMPTOMATICALLY. CONTACT POISON TREATMENT SPECIALIST IMMEDIATELY IF

LARGE QUANTITIES HAVE BEEN INGESTED OR INHALED.

SPECIFIC TREATMENTS: NO SPECIFIC TREATMENT.

PROTECTION OF FIRST-AIDERS:

NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. IF IT IS SUSPECTED THAT MISTS ARE STILL PRESENT, THE RESCUER SHOULD WEAR AN APPROPRIATE MASK OR SELF-CONTAINED BREATHING APPARATUS. IT MAY BE DANGEROUS TO THE PERSON PROVIDING AID TO GIVE MOUTH-TO-MOUTH RESUSCITATION. WASH CONTAMINATED CLOTHING THOROUGHLY WITH WATER BEFORE REMOVING IT, OR WEAR GLOVES.

SEE TOXICOLOGICAL INFORMATION (SECTION 11)

-----SECTION 5. FIRE-FIGHTING MEASURES -----

EXTINGUISHING MEDIA:

SUITABLE EXTINGUISHING MEDIA:

USE AN EXTINGUISHING AGENT SUITABLE FOR THE SURROUNDING FIRE.

UNSUITABLE EXTINGUISHING MEDIA: NONE KNOWN.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

NO SPECIFIC FIRE OR EXPLOSION HAZARD.

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS:

DECOMPOSITION PRODUCTS MAY INCLUDE THE FOLLOWING MATERIALS:

METAL OXIDE/OXIDES

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:

PROMPTLY ISOLATE THE SCENE BY REMOVING ALL PERSONS FROM THE VICINITY OF THE INCIDENT IF THERE IS A FIRE. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:

FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

-----SECTION 6. ACCIDENTAL RELEASE MEASURES -----

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

FOR NON-EMERGENCY PERSONNEL:

NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. EVACUATE SURROUNDING AREAS. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING. DO NOT TOUCH OR WALK THROUGH SPILLED MATERIAL. PROVIDE ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT.

FOR EMERGENCY RESPONDERS:

IF SPECIALISED CLOTHING IS REQUIRED TO DEAL WITH THE SPILLAGE, TAKE NOTE OF ANY INFORMATION IN SECTION 8 ON SUITABLE AND UNSUITABLE MATERIALS. SEE ALSO THE INFORMATION IN "FOR NON-EMERGENCY PERSONNEL".

ENVIRONMENTAL PRECAUTIONS:

AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR).

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

SMALL SPILL:

MOVE CONTAINERS FROM SPILL AREA. AVOID DUST GENERATION. DO NOT DRY SWEEP. VACUUM DUST WITH EQUIPMENT FITTED WITH A HEPA FILTER AND PLACE IN A CLOSED, LABELED WASTE CONTAINER. PLACE SPILLED MATERIAL IN A DESIGNATED, LABELED WASTE CONTAINER. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

LARGE SPILL:

MOVE CONTAINERS FROM SPILL AREA. APPROACH RELEASE FROM UPWIND. PREVENT ENTRY INTO SEWERS, WATER COURSES, BASEMENTS OR CONFINED AREAS. AVOID DUST GENERATION. DO NOT DRY SWEEP. VACUUM DUST WITH EQUIPMENT FITTED WITH A HEPA FILTER AND PLACE IN A CLOSED, LABELED WASTE CONTAINER. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

NOTE:

SEE SECTION 1 FOR EMERGENCY CONTACT INFORMATION AND SECTION 13 FOR WASTE DISPOSAL.

-----SECTION 7. HANDLING AND STORAGE -----

PRECAUTIONS FOR SAFE HANDLING:

PROTECTIVE MEASURES:

PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). PERSONS WITH A HISTORY OF SKIN SENSITIZATION PROBLEMS SHOULD NOT BE EMPLOYED IN ANY PROCESS IN WHICH THIS PRODUCT IS USED. AVOID EXPOSURE - OBTAIN SPECIAL INSTRUCTIONS BEFORE USE. AVOID EXPOSURE DURING PREGNANCY. DO NOT HANDLE UNTIL ALL SAFETY PRECAUTIONS HAVE BEEN READ AND UNDERSTOOD. DO NOT GET IN

EYES OR ON SKIN OR CLOTHING. DO NOT INGEST. IF DURING NORMAL USE THE MATERIAL PRESENTS A RESPIRATORY HAZARD, USE ONLY WITH ADEQUATE VENTILATION OR WEAR APPROPRIATE RESPIRATOR. KEEP IN THE ORIGINAL CONTAINER OR AN APPROVED ALTERNATIVE MADE FROM A COMPATIBLE MATERIAL, KEPT TIGHTLY CLOSED WHEN NOT IN USE. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER.

ADVICE ON GENERAL OCCUPATIONAL HYGIENE:

EATING, DRINKING AND SMOKING SHOULD BE PROHIBITED IN AREAS WHERE THIS MATERIAL IS HANDLED, STORED AND PROCESSED. WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. REMOVE CONTAMINATED CLOTHING AND PROTECTIVE EQUIPMENT BEFORE ENTERING EATING AREAS. SEE ALSO SECTION 8 FOR ADDITIONAL INFORMATION ON HYGIENE MEASURES.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN ORIGINAL CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10) AND FOOD AND DRINK. STORE LOCKED UP. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

-----SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION -----

CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS:

INGREDIENT NAME	EXPOSURE LIMITS
TIN	OSHA PEL (UNITED STATES, 9/2005). TWA: 2 MG/M3 8 HOURS.
	ACGIH TLV (UNITED STATES, 4/2014). TWA: 2 MG/M3, (AS Sn) 8 HOURS.
	NIOSH REL (UNITED STATES, 10/2013). TWA: 2 MG/M3, (AS Sn) 10 HOURS.
COPPER	OSHA FINAL RULE (UNITED STATES, 1989). NOTES: AS COPPER TWA: 1 MG/M3 8 HOURS. FORM: TWA: 0.1 MG/M3 8 HOURS.

FORM:

ACGIH TLV (UNITED STATES, 4/2014).

NOTES: AS Cu

TWA: 1 MG/M³, (AS Cu) 8 HOURS.

FORM: DUST AND MIST

NIOSH REL (UNITED STATES, 10/2013).

NOTES:

NOTE:

THE REL AND PEL ALSO APPLY TO OTHER COPPER

COMPOUNDS (AS Cu) EXCEPT COPPER FUMES.

TWA: 1 MG/M³, (AS Cu) 10 HOURS.

FORM: DUSTS AND MISTS

OSHA PEL (UNITED STATES, 2/2013).

TWA: 1 MG/M³ 8 HOURS.

FORM: DUSTS AND MISTS

TWA: 0.1 MG/M³ 8 HOURS.

FORM: FUME

ACGIH TLV (UNITED STATES, 4/2014).

NOTES:

SUBSTANCES FOR WHICH THE TLV IS HIGHER THAN THE
OSHA PERMISSIBLE EXPOSURE LIMIT (PEL) AND/OR THE
NIOSH RECOMMENDED EXPOSURE LIMIT (REL).

SEE CFR 58(124):

36338-33351, JUNE 30, 1993, FOR REVISED OSHA PEL.

ADOPTED VALUES ENCLOSED ARE THOSE FOR WHICH
CHANGES ARE PROPOSED. CONSULT THE NOTICE OF
INTENDED CHANGES FOR CURRENT PROPOSAL.

SEE NOTICE OF INTENDED CHANGES.

TWA: 0.2 MG/M³ 8 HOURS.

FORM: FUME

PROPRIETARY ALCOHOL

AIHA WEEL (UNITED STATES, 10/2011).

TWA: 0.5 PPM 8 HOURS.

APPROPRIATE ENGINEERING CONTROLS:

IF USER OPERATIONS GENERATE DUST, FUMES, GAS, VAPOR OR MIST, USE PROCESS
ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP
WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY
LIMITS.

ENVIRONMENTAL EXPOSURE CONTROLS:

EMISSIONS FROM VENTILATION OR WORK PROCESS EQUIPMENT SHOULD BE CHECKED TO ENSURE THEY COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION LEGISLATION. IN SOME CASES, FUME SCRUBBERS, FILTERS OR ENGINEERING MODIFICATIONS TO THE PROCESS EQUIPMENT WILL BE NECESSARY TO REDUCE EMISSIONS TO ACCEPTABLE LEVELS.

INDIVIDUAL PROTECTION MEASURES:

HYGIENE MEASURES:

WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING THE LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE. WASH CONTAMINATED CLOTHING BEFORE REUSING. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.

EYE/FACE PROTECTION:

SAFETY EYEWEAR COMPLYING WITH AN APPROVED STANDARD SHOULD BE USED WHEN A RISK ASSESSMENT INDICATES THIS IS NECESSARY TO AVOID EXPOSURE TO LIQUID SPLASHES, MISTS, GASES OR DUSTS. IF CONTACT IS POSSIBLE, THE FOLLOWING PROTECTION SHOULD BE WORN, UNLESS THE ASSESSMENT INDICATES A HIGHER DEGREE OF PROTECTION: SAFETY GLASSES WITH SIDE-SHIELDS.

SKIN PROTECTION:

HAND PROTECTION:

CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. CONSIDERING THE PARAMETERS SPECIFIED BY THE GLOVE MANUFACTURER, CHECK DURING USE THAT THE GLOVES ARE STILL RETAINING THEIR PROTECTIVE PROPERTIES. IT SHOULD BE NOTED THAT THE TIME TO BREAKTHROUGH FOR ANY GLOVE MATERIAL MAY BE DIFFERENT FOR DIFFERENT GLOVE MANUFACTURERS. IN THE CASE OF MIXTURES, CONSISTING OF SEVERAL SUBSTANCES, THE PROTECTION TIME OF THE GLOVES CANNOT BE ACCURATELY ESTIMATED.

BODY PROTECTION:

PERSONAL PROTECTIVE EQUIPMENT FOR THE BODY SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT.

OTHER SKIN PROTECTION:

APPROPRIATE FOOTWEAR AND ANY ADDITIONAL SKIN PROTECTION MEASURES SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT.

RESPIRATORY PROTECTION:

USE A PROPERLY FITTED, PARTICULATE FILTER RESPIRATOR COMPLYING WITH AN APPROVED STANDARD IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. RESPIRATOR SELECTION MUST BE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR.

-----SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE:

PHYSICAL STATE: SOLID.

COLOR: GRAY.

ODOR: NONE.

ODOR THRESHOLD: NOT AVAILABLE.

PH: NOT AVAILABLE.

MELTING POINT: NOT AVAILABLE.

BOILING POINT: NOT AVAILABLE.

FLASH POINT: NOT AVAILABLE.

EVAPORATION RATE: NOT AVAILABLE.

FLAMMABILITY (SOLID, GAS): NOT AVAILABLE.

LOWER AND UPPER EXPLOSIVE (FLAMMABLE) LIMITS: NOT AVAILABLE.

VAPOR PRESSURE: NOT AVAILABLE.

VAPOR DENSITY: NOT AVAILABLE.

RELATIVE DENSITY: NOT AVAILABLE.

SOLUBILITY:

INSOLUBLE IN THE FOLLOWING MATERIALS: COLD WATER AND HOT WATER.

VOC: 1.5 G/L

PARTITION COEFFICIENT N-OCTANOL/WATER: NOT AVAILABLE.

AUTO-IGNITION TEMPERATURE: NOT AVAILABLE.

DECOMPOSITION TEMPERATURE: NOT AVAILABLE.

VISCOSITY: NOT AVAILABLE.

-----SECTION 10. STABILITY AND REACTIVITY -----

REACTIVITY:

NO SPECIFIC TEST DATA RELATED TO REACTIVITY AVAILABLE FOR THIS PRODUCT OR ITS INGREDIENTS.

CHEMICAL STABILITY: THE PRODUCT IS STABLE.

POSSIBILITY OF HAZARDOUS REACTIONS:

UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS REACTIONS WILL NOT OCCUR.

INCOMPATIBILITY WITH VARIOUS SUBSTANCES:

REACTIVE OR INCOMPATIBLE WITH THE FOLLOWING MATERIALS:

OXIDIZING MATERIALS, REDUCING MATERIALS, ACIDS, ALKALIS AND MOISTURE.

CHLORINE, PEROXIDES

HAZARDOUS DECOMPOSITION PRODUCTS:

UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED.

OTHER HAZARDOUS DECOMPOSITION PRODUCTS: METAL OXIDES, TOXIC. FUMES

HAZARDOUS POLYMERIZATION:

UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

-----SECTION 11. TOXICOLOGICAL INFORMATION -----

ROUTES OF ENTRY: DERMAL CONTACT. EYE CONTACT. INHALATION. INGESTION.

ACUTE TOXICITY:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	DOSE	EXPOSURE
TIN	LD50 ORAL	RAT	>2000 MG/KG	

COPPER LC50 INHALATION RAT 5.11 MG/L 4 HOURS
DUSTS AND MISTS

ROSIN/RESIN LD50 ORAL MOUSE 2.2 G/KG
LD50 ORAL RAT 3 G/KG

PROPRIETARY ALCOHOL LD50 DERMAL RABBIT 5000 MG/KG
LD50 ORAL RAT 1600 MG/KG

IRRITATION/CORROSION:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	SCORE	EXPOSURE	OBSERVATION
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PROPRIETARY ALCOHOL	EYES:	RABBIT		24 HOURS	
	MODERATE			20 MILLIGRAMS	
	IRRITANT				

SENSITIZATION: NOT AVAILABLE.

MUTAGENICITY: NOT AVAILABLE.

CARCINOGENICITY: NO APPLICABLE TOXICITY DATA

ADDITIONAL INFORMATION:

REPRODUCTIVE TOXICITY:

PRODUCT/ INGREDIENT NAME	MATERNAL TOXICITY	FERTILITY	DEVELOPMENT TOXIN	SPECIES	DOSE	EXPOSURE
PROPRIETARY ALCOHOL	POSITIVE	POSITIVE	POSITIVE	RAT	ORAL: 150 MG/KG	18 DAYS DURING PREGNANCY
	POSITIVE	POSITIVE	POSITIVE	RAT	ORAL: 500 MG/KG	9 DAYS DURING PREGNANCY
		EQUIVOCAL		RAT - MALE	INHALATION: 500 PPM TCLO	6 HOURS PER DAY
		EQUIVOCAL		RAT - MALE	DERMAL: 65 G/KG	

TDLO

TERATOGENICITY: NOT AVAILABLE.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): NOT AVAILABLE.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): NOT AVAILABLE.

ASPIRATION HAZARD: NOT AVAILABLE.

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE:

ROUTES OF ENTRY ANTICIPATED: ORAL, DERMAL, INHALATION.

POTENTIAL ACUTE HEALTH EFFECTS:

EYE CONTACT: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

INHALATION: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SKIN CONTACT: MAY CAUSE AN ALLERGIC SKIN REACTION.

INGESTION: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:

EYE CONTACT: NO SPECIFIC DATA.

INHALATION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

SKIN CONTACT:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

IRRITATION

REDNESS

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

INGESTION:

ADVERSE SYMPTOMS MAY INCLUDE THE FOLLOWING:

REDUCED FETAL WEIGHT

INCREASE IN FETAL DEATHS

SKELETAL MALFORMATIONS

DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT AND LONG

TERM EXPOSURE:

SHORT TERM EXPOSURE:

POTENTIAL IMMEDIATE EFFECTS: NOT AVAILABLE.

POTENTIAL DELAYED EFFECTS: NOT AVAILABLE.

LONG TERM EXPOSURE:

POTENTIAL IMMEDIATE EFFECTS: NOT AVAILABLE.

POTENTIAL DELAYED EFFECTS: NOT AVAILABLE.

POTENTIAL CHRONIC HEALTH EFFECTS:

GENERAL:

ONCE SENSITIZED, A SEVERE ALLERGIC REACTION MAY OCCUR WHEN SUBSEQUENTLY
EXPOSED TO VERY LOW LEVELS.

CARCINOGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

MUTAGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

TERATOGENICITY: MAY DAMAGE THE UNBORN CHILD.

DEVELOPMENTAL EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

FERTILITY EFFECTS: SUSPECTED OF DAMAGING FERTILITY.

NUMERICAL MEASURES OF TOXICITY:

ACUTE TOXICITY ESTIMATES:

ROUTE	ATE VALUE
ORAL	130053.1 MG/KG

-----SECTION 12. ECOLOGICAL INFORMATION -----

TOXICITY:

PRODUCT/INGREDIENT NAME	RESULT	SPECIES	EXPOSURE
COPPER	ACUTE EC50: 1100 (MICRO)G/L FRESH WATER	AQUATIC PLANTS - LEMNA MINOR	4 DAYS
	ACUTE EC50: 2.1 (MICRO)G/L	DAPHNIA - DAPHNIA LONGISPINA - JUVENILE	48 HOURS

FRESH WATER	(FLEDGLING, HATCHLING, WEANLING)	
ACUTE IC50: 13 (MICRO)G/L	ALGAE - PSEUDOKIRCHNERIELLA	72 HOURS
FRESH WATER	SUBCAPITATA - EXPONENTIAL GROWTH PHASE	
ACUTE IC50: 5.4 MG/L	AQUATIC PLANTS - PLANTAE - EXPONENTIAL	72 HOURS
MARINE WATER	GROWTH PHASE	
ACUTE LC50: 0.072 (MICRO)G/L	CRUSTACEANS - AMPHIPODA - ADULT	48 HOURS
MARINE WATER		
ACUTE LC50: 7.56 (MICRO)G/L	FISH - PERIOPHTHALMUS WALTONI - ADULT	96 HOURS
MARINE WATER		
CHRONIC NOEC: 2.5 (MICRO)G/L	ALGAE - NITZSCHIA CLOSTERIUM -	72 HOURS
MARINE WATER	EXPONENTIAL GROWTH	

PHASE

CHRONIC NOEC: AQUATIC PLANTS - 3 DAYS

7 MG/L

CERATOPHYLLUM

FRESH WATER

DEMERSUM

CHRONIC NOEC: CRUSTACEANS - CAMBARUS 21 DAYS

0.02 MG/L

BARTONII - MATURE

FRESH WATER

CHRONIC NOEC: DAPHNIA - DAPHNIA MAGNA 21 DAYS

2 (MICRO)G/L

FRESH WATER

CHRONIC NOEC: FISH - OREOCHROMIS 6 WEEKS

0.8 (MICRO)G/L

NILOTICUS - JUVENILE

FRESH WATER

(FLEDGLING, HATCHLING,
WEANLING)

PERSISTENCE AND DEGRADABILITY: NOT AVAILABLE.

BIOACCUMULATIVE POTENTIAL:

PRODUCT/INGREDIENT NAME	LOGPOW	BCF	POTENTIAL
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ROSIN/RESIN	1.9 TO 7.7		HIGH
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MOBILITY IN SOIL:

SOIL/WATER PARTITION COEFFICIENT (KOC): NOT AVAILABLE.

OTHER ADVERSE EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

-----SECTION 13. DISPOSAL CONSIDERATIONS -----

DISPOSAL METHODS:

THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE.

DISPOSAL OF THIS PRODUCT, SOLUTIONS AND ANY BY-PRODUCTS SHOULD AT ALL TIMES

COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL

LEGISLATION AND ANY REGIONAL LOCAL AUTHORITY REQUIREMENTS. DISPOSE OF SURPLUS

AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR. WASTE

SHOULD NOT BE DISPOSED OF UNTREATED TO THE SEWER UNLESS FULLY COMPLIANT WITH

THE REQUIREMENTS OF ALL AUTHORITIES WITH JURISDICTION. WASTE PACKAGING

SHOULD BE RECYCLED. INCINERATION OR LANDFILL SHOULD ONLY BE CONSIDERED WHEN

RECYCLING IS NOT FEASIBLE. THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED

OF IN A SAFE WAY. CARE SHOULD BE TAKEN WHEN HANDLING EMPTIED CONTAINERS THAT

HAVE NOT BEEN CLEANED OR RINSED OUT. EMPTY CONTAINERS OR LINERS MAY RETAIN

SOME PRODUCT RESIDUES. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS.

-----SECTION 14. TRANSPORT INFORMATION -----

	DOT	TDG	MEXICO
	CLASSIFICATION	CLASSIFICATION	CLASSIFICATION
UN NUMBER	NOT REGULATED.	NOT REGULATED.	NOT REGULATED.

UN PROPER SHIPPING NAME

TRANSPORT HAZARD

CLASS(ES)

PACKING GROUP

ENVIRONMENTAL HAZARDS	NO.	NO.	NO.
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UN	IMDG	IATA
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TSCA 5(A)2 FINAL SIGNIFICANT NEW USE RULE (SNUR): NO PRODUCTS WERE FOUND.

TSCA 12(B) ONE-TIME EXPORT NOTIFICATION: NO PRODUCTS WERE FOUND.

TSCA 12(B) ANNUAL EXPORT NOTIFICATION: NO PRODUCTS WERE FOUND.

UNITED STATES INVENTORY (TSCA 8B): ALL COMPONENTS ARE LISTED OR EXEMPTED.

SARA 302/304:

COMPOSITION/INFORMATION ON INGREDIENTS: NO PRODUCTS WERE FOUND.

SARA 311/312:

CLASSIFICATION:

IMMEDIATE (ACUTE) HEALTH HAZARD

DELAYED (CHRONIC) HEALTH HAZARD

SARA 313:

PRODUCT NAME	CAS NUMBER	%
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FORM R - REPORTING REQUIREMENTS:

COPPER	7440-50-8	1-10
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SUPPLIER NOTIFICATION:

COPPER

7440-50-8

1-10

SARA 313 NOTIFICATIONS MUST NOT BE DETACHED FROM THE SDS AND ANY COPYING AND REDISTRIBUTION OF THE SDS SHALL INCLUDE COPYING AND REDISTRIBUTION OF THE NOTICE ATTACHED TO COPIES OF THE SDS SUBSEQUENTLY REDISTRIBUTED.

CALIFORNIA PROP. 65:

WARNING:

THIS PRODUCT CONTAINS LESS THAN 1% OF A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

CANADA:

WHMIS (CANADA):

CLASS D-2A: MATERIAL CAUSING OTHER TOXIC EFFECTS (VERY TOXIC).

CANADA INVENTORY: ALL COMPONENTS ARE LISTED OR EXEMPTED.

INTERNATIONAL LISTS:

NATIONAL INVENTORY:

AUSTRALIA: ALL COMPONENTS ARE LISTED OR EXEMPTED.

CHINA: ALL COMPONENTS ARE LISTED OR EXEMPTED.

EUROPE: ALL COMPONENTS ARE LISTED OR EXEMPTED.

JAPAN: ALL COMPONENTS ARE LISTED OR EXEMPTED.

NEW ZEALAND: ALL COMPONENTS ARE LISTED OR EXEMPTED.

PHILIPPINES: ALL COMPONENTS ARE LISTED OR EXEMPTED.

REPUBLIC OF KOREA: ALL COMPONENTS ARE LISTED OR EXEMPTED.

TAIWAN: ALL COMPONENTS ARE LISTED OR EXEMPTED.

-----SECTION 16. OTHER INFORMATION -----

HAZARDOUS MATERIAL INFORMATION SYSTEM (U.S.A.):

HEALTH 1

FLAMMABILITY 1

PHYSICAL HAZARDS 0

PROCEDURE USED TO DERIVE THE CLASSIFICATION:

CLASSIFICATION

JUSTIFICATION

SKIN SENS. 1, H317

CALCULATION METHOD

REPR. 1B, H360 (UNBORN CHILD)

CALCULATION METHOD

REPR. 2, H361 (FERTILITY)

CALCULATION METHOD

HISTORY:

DATE OF ISSUE/DATE OF REVISION: MAY 15 2015.

DATE OF PREVIOUS ISSUE: NO PREVIOUS VALIDATION.

VERSION: 1

PREPARED BY:

REGULATORY AFFAIRS DEPARTMENT

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KEY TO ABBREVIATIONS:

ATE: ACUTE TOXICITY ESTIMATE

BCF: BIOCONCENTRATION FACTOR

GHS: GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

IATA: INTERNATIONAL AIR TRANSPORT ASSOCIATION

IBC: INTERMEDIATE BULK CONTAINER

IMDG: INTERNATIONAL MARITIME DANGEROUS GOODS

LOGPOW: LOGARITHM OF THE OCTANOL/WATER PARTITION COEFFICIENT

MARPOL 73/78:

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

AS MODIFIED BY THE PROTOCOL OF 1978. ("MARPOL" = MARINE POLLUTION)

UN: UNITED NATIONS

| INDICATES INFORMATION THAT HAS CHANGED FROM PREVIOUSLY ISSUED VERSION.

NOTICE TO READER:

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE.

HOWEVER, NEITHER THE ABOVE-NAMED SUPPLIER, NOR 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 THAT EXIST.

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ALPHA SDS GHS AMERICAS

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