

MATERIAL SAFETY DATA SHEET

OMEGAnet™ On-line Service
<http://www.omega.com>



Internet e-mail
info@omega.com

MSDS-0368
4% Silver Bearing,
Cadmium-Free Solder
REV DATE: 8/11/92

SECTION 1 - IDENTIFICATION

PRODUCT (TRADE) NAME: 4% Silver-Bearing, Cadmium-Free Solder

CHEMICAL FAMILY: N/A

TRADE NAME SYNONYMS: 430 Rosin Core Solder, 430 Solder, 430 Paste Solder,
Aquasafe 100

SUPPLIER: OMEGA ENGINEERING, INC
.P.O. BOX 4047

STAMFORD, CT 06907

TELEPHONE: (203) 359-1660

SHIPPING NAME (UN NUMBER PER TRANSPORTATION AUTHORITY): N/A

EMERGENCY RESPONSE TELEPHONE NUMBERS:
(800) 255-3924 (813) 979-0626

SECTION 2 - HAZARDOUS INGREDIENTS**Hazardous Ingredients/Identity Information**

| | % | OSHA PEL (mg/m3) | ACGIH TLV (mg/m3) | CAS Number |
|-------------------|---------|---------------------|----------------------|---------------|
| Tin | 1-6 | 2.0 | 2.0 | 7440-31-5 |
| Silver* | 1 | 0.1 | 0.01 | 7440-22-4 |
| Copper* | 4 | 0.1 | 0.2 | 7440-50-8 |
| Zinc Chloride* | 15-25 | 1.0 | 1.0 | 7646-85-7 |
| Ammonium Chloride | — | 10.0 | 10.0 | 12125-02-9 |
| Rosin | — | N/A | N/A | 8050-09-7 |
| Lead* | 0.2-0.2 | 0.05 | 0.15 | 7439-92-1 |

Subject to the reporting requirements of Section 313 of SARATitle III and 40 CFR,
part 372.

SECTION 3-PHYSICAL DATA

BOILING POINT (°C): 2250

MELTING POINT (°F): 250

SPECIFIC GRAVITY (H₂O = 1): 1.1

VAPOR PRESSURE (mm Hg): N/A

PERCENT VOLATILE BY VOLUME (%): 100

SECTION 3- PHYSICAL DATA (CON'T)

VAPOR DENSITY (Air = 1): N/A

EVAPORATION RATE (Ethyl ether = 1): N/A

SOLUBILITY IN WATER: None

MATERIAL AT NORMAL CONDITION: Solid

APPEARANCE AND ODOR: Silver white metal; light rosin odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 300°F

FLASH POINT (METHOD USED): N/A

FLAMMABILITY LIMITS IN AIR (% BY VOL): LOWER: 220 UPPER: N/A

EXTINGUISHING MEDIA: Dry chemical, carbon dioxide. Do not use Class A, B, or C
extinguishers or halogenated agents.

SPECIAL FIRE FIGHTING PROCEDURES: In extremely high temperatures or
volatile fires, or when in contact with certain acids, may emit toxic fumes. Use self-
contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARD: Above 650°F, ammonia, hydrogen
chloride gas, and zinc chloride fumes are formed.

SECTION 5 - HEALTH AND HAZARD DATA

THRESHOLD LIMIT VALUE: N/A

UNUSUAL CHRONIC TOXICITY: In a rosin-sensitive person, a allergic reaction can
result.

CARCINOGENICITY: Lead is an OSHA-regulated substance.

ROUTES OF EXPOSURE: Principally skin contact, ingestion, and inhalation of
vapors.

EFFECTS OF OVEREXPOSURE: Inhalation may cause irritation of the respiratory
tract. Some skin contact can cause irritation. Eye contact can be corrosive. Rosin is
potentially allergenic and may cause rashes. Chronic overexposure can result in lung
and pulmonary damage. Paste is extremely corrosive and can cause skin damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye, skin,
and respiratory conditions.

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT: Immediately flush with large amounts of water for 15 minutes. Obtain
medical attention as soon as possible.

SKIN CONTACT: Wash affected areas with soap and water. consult a physician.

INHALATION: Remove from exposure and seek immediate medical attention.

INGESTION: Give several large quantities of milk or water. Do not induce vomit-
ing. Consult a physician immediately.

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SECTION 6 - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Open flames.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids, sulfur, chlorine, sodium, and potassium peroxide. Strong oxidizers may cause a violent reaction.

HAZARDOUS DECOMPOSITION PRODUCTS: Toxic organic or inorganic tin compounds.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: N/A

SECTION 7 - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Anyone entering an area with high vapor content should use a self-contained air pack. Avoid inhalation of dust or fumes. Wear protective clothing, goggles, and a NIOSH-approved respirator. Do not use compressed air for cleaning. Put material in a closed container for disposal.

WASTE DISPOSAL METHOD: Material that cannot be used should be disposed of in compliance with Federal, state, and local regulations. Store in a closed container. Pure tin, and copper/silver/tin alloys present no problems for disposal and can be salvaged for their economic value.

SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Where airborne exposures may exceed OSHA/ACGIH permissible air levels, the minimum protection recommended is a negative pressure air purifying respirator with cartridges that are NIOSH/MSHA approved against dust, fumes and mists having a TWA of not less than 0.05 mg/m³.

VENTILATION: Local exhaust is recommended where airborne exposures exceed permissible levels. Minimum face velocity for local exhaust 60–200 fpm.

PROTECTIVE GLOVES: Chemical-resistant gloves.

EYE PROTECTION: Chemical safety goggles or face plate shield.

OTHER PROTECTIVE EQUIPMENT: Safety eyewash station should be in close proximity. Use chemical-resistant apron.

SECTION 9- SPECIAL PRECAUTIONS

RECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in a cool, dry, well-ventilated area remote from excessive heat and acids.

VALVE CONNECTION: N/A

OTHER PRECAUTIONS: Use good hygienic practices. Do not consume food or drink or use tobacco or cosmetics in the work area. Avoid inhalation or ingestion.

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