# *Safety Data Sheet (SDS) One Step•LF (Lead Free No Clean)*

**1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING.**

| | | |
|---|---|---|
| 1.1 | Identification of substance (as per label):<br>Other means of Identification: | Lead Free One Step Desoldering Braid |
| 1.2 | Company Name: Easy Braid Co.<br>Contact Name: Jim Strempke<br>Full Address: 11543 K-tel Drive<br>Minneapolis, MN 55343 USA<br>Telephone Number: 952-929-3040<br>Fax Number: 952-929-2765<br>Emergency Number: 952-929-3040 | Part Numbers: LF-A-5AS, LF-A-10AS, LF-A-25, LF-A-100, LF-B-5AS, LF-B-10AS, LF-B-25, LF-B-100, LF-C-5AS, LF-C-10AS, LF-C-25, LF-C-100, LF-D-5AS, LF-D-10AS, LF-D-25, LF-D-100, LF-E-5AS, LF-E-10AS LF-E-25, LF-E-100 |
| 1.3 | Material uses | Electronic Circuit Board Repair- Solder Removal |

**2. HAZARDS IDENTIFICATION**

| | | |
|---|---|---|
| 2.1 | Critical Hazards: | HMIS Hazard Rating: 0 = insignificant<br>1 = slight<br>2 = moderate<br>3 = high<br>4 = extreme |
| 2.2 | Critical Hazards to Man & Environment:<br><br><br>Adverse Human Health Effects and Symptoms: | Health = 1<br>Flammability = 0<br>Reactivity = 0<br>Rosin flux may cause an allergic reaction, resulting in a skin rash. Clean hands after use. |
| 2.3 | Hazard Classification | Skin Sensitizer, Cat 1. |
| 2.4 | Single Word | Warning |
| 2.5 | Pictogram | |
| 2.6 | Hazard Statements | May cause allergic skin reaction |
| 2.7 | Precautionary Statement | Prevention:<br>Avoid breathing/dust/fume/gas/mist/vapours/spray<br>Contaminated work clothing should not be allowed out of the workplace<br>Wear protective gloves<br><br>Response:<br>IF ON SKIN: Wash with pleny of water<br>If skin irritation or rash occurs: Get medical advice/attention<br>Take off contaminated clothing and wash it before ruse<br>Review section 4 for additional response<br><br>Disposal:<br>Dispose of contents/container in accordance with logal regulations |

**3. COMPOSITION / IDENTIFICATION ON INGREDIENTS**

| CAS NUMBER | INGREDIENTS | % | SYMBOLS | |
|---|---|---|---|---|
| 7440-50-8 | Copper Metal | 99.9% | | |
| | Lead | <.0001% | | RoHS compliance limit: 0.10% |
| | Cadmium | <0.00005% | | RoHS compliance limit: 0.01% |
| | Chromium | <0.00005% | | RoHS compliance limit: 0.10% |
| | Tin | | | |
| | Lead | 0.0030-0.0035% | | RoHS compliance limit: 0.10% |
| | Cadimium | 0.0005-0.0010% | | RoHS compliance limit: 0.01% |
| 8050-09-7 | Modified Rosin | 0.1% | | |

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| | | |
|---|---|---|
| 3.1 | Substances presenting a health hazard: | The 0.1% Rosin may cause allergic reactions: does not contain hazardous ingredients. |
| 3.2 | Exposure Limit Values: | Copper - ACGIH TLV |
| 3.3 | Is substance is confidential - indicate chemical nature to ensure safe handling | -fume 0.1mg/m3<br>-dust 1.0mg/m3 |

**4. FIRST AID MEASURE**

| | | |
|---|---|---|
| 4.1 | Skin Contact: | Flush skin with copious amounts of water. |
| | -First Aid: | |
| | -Symptoms: | Rash. |
| | -Effects: | |
| | -Delayed Effects: | |
| | -Medical Attention Needed: | |
| | Eye Contact: | Remove metal fragments and flush eyes with water. |
| | -First Aid: | |
| | -Symptoms: | |
| | -Effects: | |
| | -Delayed Effects: | |
| | -Professional Attention Needed: | |
| | Inhalation: | |
| | -First Aid: | Remove to fresh air. If breathing has stopped, administer CPR. |
| | -Symptoms: | |
| | -Effects: | |
| | -Delayed Effects: | |
| | -Professional Attention Needed: | |
| | Ingestion: | |
| | -First Aid: | Induce vomiting. |
| | -Symptoms: | |
| | -Effects: | |
| | -Delayed Effects: | Wire strands could cause internal digestive tract bleeding. |
| | -Professional Attention Needed: | Induce vomiting. |

**5. FIRE FIGHTING MEASURES**

| | | |
|---|---|---|
| 5.1 | Suitable Extinguishing Media: | Powder Dolomite, Sodium Chloride or Graphite. |
| 5.2 | Unsuitable Extinguishing Media: | Do not use water. |
| 5.3 | Exposure Hazards: | Copper reacts violently with C2H2, NH4N03, Bromates, Chlorates, Iodates, C12, C1F2, Ethylene Oxide, F2, H2O2, Hydrazine monoitrate, Hydrazoic acid, H2S, K202, NaN3, Na202, CUN03, S. |
| 5.4 | Combustion Products: | Carbon Monoxide, Aliphatic Aldehydes, and Acids |
| | -Resulting Gases: | |
| 5.5 | Protective Equipment For Firefighters: | Not Needed |

**6. ACCIDENTAL RELEASE MEASURES**

| | | |
|---|---|---|
| 6.1 | Personal Precautions: | |
| | -Ignition sources? | When subjected to temperatures over 180$^{o}$ F, flux fumes should be vented. |
| | -Provision for sufficient ventilation? | |
| | -Control of dust? | See Section 8.1. |
| | -Prevention of skin contact? | Vacuum or sweep up and dispose of as a non-cumbustable metal. |
| | -Prevention of eye contact? | Gloves not normally required. When clipping short lengths, protective eyewear is recommended. |
| 6.2 | Environmental Precautions: | |
| 6.3 | Methods for Cleaning Up: | |
| 6.4 | Materials not to be Used for Cleaning Up: | Vacuum or sweep up and dispose of as a noncombustible solid. See above. See section 5, of this document. |

**7. HANDLING & STORAGE**

| | | |
|---|---|---|
| 7.1 | Handling | |
| | -General Rules | Store in cool, dry environment for functional purposes. |
| | -Technical Precautions for Safe Handling | None required. |
| | -Measures necessary to prevent airborne levels of chemical being generated as a result of handling. | If product is exposed to temperatures are above 180$^{0}$ F, use local ventilation. |
| 7.2 | Recommended Storage Conditions | |
| | -List incompatible materials | |
| | -Quantity Limits for storage | See sections 5 & 2 of this document. |
| | -Special Requirements for proper storage of chemical | |

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

| | | |
|---|---|---|
| 8.1 | System Design<br>(e.g. Fume Hoods, Ventilated Cabinets, Enclosure) | General mechanical or local hood. Ventilation is recommended for applications where the product will exceed $180^0$ F. |
| 8.2 | Control Parameters<br>-Limit values or biological standards: | |
| 8.3 | Recommended Monitoring Procedures: | See Section 5, of this document. |
| 8.4 | Personal Protection<br>-Respiratory Protection:<br>-Hand Protection:<br>-Eye Protection:<br>-Skin Protection: | Use local or general ventilation away from the operator if the product temperature is exposed to $180^0$ F+.<br><br>Gloves may be used if resin is a skin irritant.<br>Eye protection should be worn when clipping short lengths.<br>See hand protection. |
| 8.5 | CEN standards | Carcinogens < 0.1% |

**9. PHYSICAL AND CHEMICAL PROPERTIES**

| | | |
|---|---|---|
| 9.1 | Appearance: | Copper metallic braid with fine crystalline resin layer. |
| 9.2 | Odor: | None. |
| 9.3 | pH: | N/A |
| 9.4 | Boiling Point: | 1981 degrees F |
| 9.5 | Melting Point: | 1949 degrees F |
| 9.6 | Flash Point: | No flash |
| 9.7 | Flammability (solid gas): | None |
| 9.8 | Autoflammability: | None |
| 9.9 | Explosive Properties: | None |
| 9.10 | Oxidizing Properties: | Copper can oxidize if prolonged exposure in moist conditions. |
| 9.11 | Vapor Pressure: | N/A |
| 9.12 | Relative Density: | N/A |
| 9.13 | Solubility: | |
| | -Water Solubility | Negligible |
| | -Fat Solubility | Unknown |
| 9.14 | Partition coefficient, n-octanol/water: | |
| 9.15 | Other Data: | |
| | -Safety Parameters | N/A |
| | -Vapor Density | N/A |
| | -Miscibility | N/A |
| | -Evaporation rate | N/A |
| | -Conductivity | Copper is very conductive. |
| | -Viscosity | A solid |

**10. STABILITY AND REACTIVITY**

| | | |
|---|---|---|
| 10.1 | Stability | Stable |
| 10.2 | Conditions to avoid<br>-Effects | |
| 10.3 | Materials to Avoid<br>-Effects | |
| 10.4 | Hazardous Decomposition products<br>-the need for and the presence of stabilizers:<br>-hazardous exothermic reaction:<br>-change in appearance in the substance:<br>-hazardous products formed upon contact with water:<br>-possible degradation to unstable products: | <br><br>Hazardous environment can occur in the presence of excessive heat and/or chemicals as listed in Section 5, this document. |

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**11. TOXICOLOGICAL INFORMATION**

| | | |
|---|---|---|
| 11.1 | Skin Exposure: | |
| | -Symptoms: | Possible allergic rash reaction. See Section 4, this document. |
| | -Immediate Effects: | |
| | -Delayed Effects: | |
| | -Chronic Effects: | |
| | -Special Health Effects: | |
| 11.2 | Eye Contact: | |
| | -Symptoms: | Possible danger of metal fragments. See Section 4, this document. |
| | -Immediate Effects: | |
| | -Delayed Effects: | |
| | -Chronic Effects: | |
| | -Special Health Effects: | |
| 11.3 | Inhalation: | |
| | -Symptoms: | |
| | -Immediate Effects: | If product is exposed to temperatures in excess of $180^0$ F, local ventilation must be used. |
| | -Delayed Effects: | |
| | -Chronic Effects: | |
| | -Special Health Effects: | |
| 11.4 | Ingestion: | |
| | -Symptoms: | |
| | -Immediate Effects: | May be moderately irritating to stomach lining. Induce vomiting if conscious. |
| | -Delayed Effects: | |
| | -Chronic Effects: | |
| | -Special Health Effects: | |

**12. ECOLOGICAL INFORMATION**

| | | |
|---|---|---|
| 12.1 | Mobility<br>-distribution to environmental compartments<br>-surface tension<br>-absorption / desorption<br>-physical & chemical properties | Not applicable. |
| 12.2 | Degradability<br>-biotic and abiotic degradation<br>-acrobic and anaerobic degradation<br>-persistence | Not applicable. |
| 12.3 | Accumulation<br>-bioaccumulation potential<br>-biomagnification | Not applicable. |
| 12.4 | Short and Long Term Effects on:<br>-*Ecotoxity*<br>-aquatic organisms<br>-soil organisms<br>-plants and terrestrial animals<br>-*Other Adverse Effects*<br>-ozone depletion potential<br>-photochemical ozone creation potential<br>-effects on waste water treatment plants | Not applicable. |

**13. DISPOSAL CONSIDERATIONS**

| | | |
|---|---|---|
| 13.1 | Safe Handling | Consult with local regulatory bodies to metallic solid waste disposal |
| 13.2 | Methods of Disposal | |

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**14. TRANSPORT INFORMATION**

| | | |
|---|---|---|
| 14.1 | UN Number: | Harmonized Tariff Code:<br>#7413.00.1000 |
| 14.2 | Road & Sea Freight Classification: | Copper wire coated with resin flux |
| 14.3 | Substance Classification Number: | |
| 14.4 | Class: | |
| 14.5 | Packing Group: | Validated license # / General license symbol: "NLR" |
| 14.6 | Proper Shipping Name:<br>PGR (if applicable) | |
| 14.7 | ADR/RID CLASSIFICATION:<br>Class:<br>Item Number: | |
| 14.8 | ICAO/IATA CLASSIFICATION:<br>Class:<br>Sub-Risk:<br>Packing Group:<br>Proper Shipping Name: | |

**15. REGULATORY INFORMATION**

| | | |
|---|---|---|
| 15.1 | Precautionary Label Information: | This product does not require warning labels due to Hazards |
| 15.2 | Symbols: | Classification as designated in Section 3. |
| 15.3 | Risk Phrases: | Risk Phrases: R36/37/38 |
| 15.4 | Safety Phrases: | Safety Phrases: S14 (per section 5), S22/39, S43 (per section 5) |

**16. OTHER INFORMATION**

| | | |
|---|---|---|
| 16.1 | Regulatory Information: | |

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