

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

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

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|     |   |   |
|-----|---|---|
| 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 Strempe<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 |

## 2. COMPOSITION / IDENTIFICATION ON INGREDIENTS

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

|     |   |  |
|-----|---|--|
| 2.1 | Substances presenting a health hazard:  | The 0.1% Rosin may cause allergic reactions: does not contain hazardous ingredients.                   |
| 2.2 | Exposure Limit Values:  | Copper - <span style="float: right;">ACGIH<br/>TLV</span>  |
| 2.3 | Is substance is confidential - indicate chemical nature to ensure safe handling | -fume <span style="float: right;">0.1mg/m3</span><br>-dust <span style="float: right;">1.0mg/m3</span> |

## 3. HAZARDS IDENTIFICATION

|     |  |  |
|-----|--|--|
| 3.1 | Critical Hazards:  | HMIS Hazard Rating: 0 = insignificant<br>1 = slight<br>2 = moderate<br>3 = high<br>4 = extreme   |
| 3.2 | Critical Hazards to Man & Environment:<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.<br>Clean hands after use. |

## 4. FIRST AID MEASURE

|     |   |  |
|-----|---|--|
| 4.1 | <u>Skin Contact:</u><br>-First Aid:<br>-Symptoms:<br>-Effects:<br>-Delayed Effects:<br>-Medical Attention Needed:<br><u>Eye Contact:</u><br>-First Aid:<br>-Symptoms:<br>-Effects:<br>-Delayed Effects:<br>-Professional Attention Needed:<br><u>Inhalation:</u><br>-First Aid:<br>-Symptoms:<br>-Effects:<br>-Delayed Effects:<br>-Professional Attention Needed:<br><u>Ingestion:</u><br>-First Aid:<br>-Symptoms:<br>-Effects:<br>-Delayed Effects:<br>-Professional Attention Needed: | Flush skin with copious amounts of water.<br><br>Rash.<br><br>Remove metal fragments and flush eyes with water.<br><br>Remove to fresh air. If breathing has stopped, administer CPR.<br><br>Induce vomiting.<br><br>Wire strands could cause internal digestive tract bleeding.<br>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 C <sub>2</sub> H <sub>2</sub> , NH <sub>4</sub> N <sub>3</sub> , Bromates, Chlorates, Iodates, Cl <sub>2</sub> , ClF <sub>2</sub> , Ethylene Oxide, F <sub>2</sub> , H <sub>2</sub> O <sub>2</sub> , Hydrazine monoitrate, Hydrazoic acid, H <sub>2</sub> S, K <sub>2</sub> O <sub>2</sub> , NaN <sub>3</sub> , Na <sub>2</sub> O <sub>2</sub> , CUN <sub>3</sub> , S. |
| 5.4 | Combustion Products:<br>-Resulting Gases: | Carbon Monoxide, Aliphatic Aldehydes, and Acids   |
| 5.5 | Protective Equipment For Firefighters:    | Not Needed  |

**6. ACCIDENTAL RELEASE MEASURES**

|     |   |  |
|-----|---|--|
| 6.1 | Personal Precautions:<br>-Ignition sources?<br>-Provision for sufficient ventilation?<br>-Control of dust?<br>-Prevention of skin contact?<br>-Prevention of eye contact? | When subjected to temperatures over 180° F, flux fumes should be vented.<br>See Section 8.1.<br>Vacuum or sweep up and dispose of as a non-cumbustable metal.<br>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.<br>See above. See section 5, of this document.  |

**7. HANDLING & STORAGE**

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

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

**11. TOXICOLOGICAL INFORMATION**

|      |                          |  |
|------|--------------------------|--|
| 11.1 | Skin Exposure:           |  |
|      | -Symptoms:               |  |
|      | -Immediate Effects:      | Possible allergic rash reaction. See Section 4, this document.   |
|      | -Delayed Effects:        |  |
|      | -Chronic Effects:        |  |
|      | -Special Health Effects: |  |
| 11.2 | Eye Contact:             |  |
|      | -Symptoms:               |  |
|      | -Immediate Effects:      | Possible danger of metal fragments. See Section 4, this document.                                      |
|      | -Delayed Effects:        |  |
|      | -Chronic Effects:        |  |
|      | -Special Health Effects: |  |
| 11.3 | Inhalation:              |  |
|      | -Symptoms:               |  |
|      | -Immediate Effects:      |  |
|      | -Delayed Effects:        | If product is exposed to temperatures in excess of 180 <sup>o</sup> F, local ventilation must be used. |
|      | -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>-aerobic 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>- <i>Ecotoxicity</i><br>-aquatic organisms<br>-soil organisms<br>-plants and terrestrial animals<br>- <i>Other Adverse Effects</i><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 |   |

## 14. TRANSPORT INFORMATION

|      |   |   |
|------|---|---|
| 14.1 | UN Number:  | Harmonized Tariff Code:<br>#7413.00.1000<br>Copper wire coated with resin flux<br><br>Validated license # / General license symbol: "NLR" |
| 14.2 | Road & Sea Freight Classification:  |   |
| 14.3 | Substance Classification Number:  |   |
| 14.4 | Class:  |   |
| 14.5 | Packing Group:  |   |
| 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 Classification as designated in Section 3.<br>Risk Phrases: R36/37/38<br>Safety Phrases: S14 (per section 5), S22/39, S43 (per section 5) |
| 15.2 | Symbols:                         |   |
| 15.3 | Risk Phrases:                    |   |
| 15.4 | Safety Phrases:                  |   |

## 16. OTHER INFORMATION

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