

**Safety data sheet  
 as per 91/155/EEC**

Written on: **20.07.2005**  
 Revised on:

SDS no. **035\_E**  
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**Trade Name:  
 Weller Solder Wire LF**

<b>1 Materials/Preparation and company designation</b>	
Production specifications:	<i>Solder Wire SN96,5 AG3CU0,5F3L1</i>
Trade name: model no.	<i>Weller Solder Wire LF Ø 0,5 Order no. 005 13 822 99  Weller Solder Wire LF Ø 1,0 Order no. 005 13 823 99</i>
Manufacturer/supplier:	<i>CooperTools GmbH, Carl-Benz-Str. 2, 74354 Besigheim  Tel: +49 7143 580-0, Fax: +49 7143 580-108</i>
Information supplied by:	<i>Environmental Protection Department  Tel.: +49 7143 580 101, Fax: +49 7143 580 183</i>
Emergency Phone:	<i>GIZ Mainz Tel.: +49 6131 - 19240</i>

<b>2 Composition/component data</b>					
Chemical characteristics:					
▪ Description:		<i>Tin alloy</i>			
▪ Hazardous contents:					
<b>CAS No.</b>	<b>Designation</b>	<b>%</b>	<b>Code</b>	<b>R paragraphs</b>	<b>EU No.</b>
<i>7440-31-5</i>	<i>Tin</i>	<i>94,8-97,5</i>			<i>231-141-8</i>
<i>7440-50-8</i>	<i>Copper</i>	<i>0,3-0,7</i>			<i>231-159-6</i>
<i>8050-09-7</i>	<i>Colophony</i>	<i>1-10</i>	<i>Xi</i>	<i>37-43</i>	<i>232-475-7</i>
<i>7440-22-4</i>	<i>Silver</i>	<i>2,7-3,9</i>			<i>231-131-3</i>

<b>3 Potential hazards</b>	
Hazard designation:	<i>N/A</i>
Special hazards information for persons and environment:	<i>Contact with molten liquid will cause severe burns. Repeated Exposure may cause cumulative effects. Sensitisation by Skin Contact.</i>

<b>4 First aid measures</b>	
General information:	<i>None</i>
After inhalation:	<i>Remove at once to fresh air. Keep warm and rest. Call for immediate medical attention if there is any respiratory Distress.</i>
After skin contact:	<i>Wash the skin with soap and warm water. If any soreness or Inflammation persists call for medical attention. Wash all contaminated workwear before reuse. After contact with molten liquid, flood with cold water. Call for immediate medical attention.</i>
After eye contact:	<i>Flush eyes for several minutes with flowing water, keeping eyes open. Call for immediate medical attention.</i>
After swallowing:	<i>Do not induce vomiting. Keep warm and rest. Wash out mouth. Call for immediate medical attention.</i>

<b>5 Fire-fighting measures</b>	
Suitable extinguishing agent:	<i>Use an Alcohol resistant foam, Water spray, Dry chemical. Sand may be used for small fires.</i>
Unsuitable extinguishing agents for safety reasons:	<i>Do NOT use water jet or Carbon Dioxide extinguisher.</i>
Special hazard resulting from the substance, its combustion products or resulting gases:	<i>Gives off hazardous fumes in a fire.</i>
Special protective equipment:	<i>Use Full Protective Clothing and Self-Contained Breathing Apparatus Operated in Positive Pressure Mode.</i>

<b>6 Measures if inadvertently released</b>	
Personal precautions:	<i>Avoid skin contact. Wear appropriate protective clothing.</i>
Environmental precautions:	<i>Never permit release to sewage system.</i>
Procedure for cleaning/gathering up:	<i>Scoop or Sweep UP and Discard. Avoid creating dust.</i>

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<b>7 Handling and storage</b>	
Handling	
▪ Information for safe handling:	<i>Avoid contact with the eyes and skin. Avoid breathing fumes and Dust. Use local exhaust ventilation. Avoid contaminated workwear.</i>
▪ Information for fire and explosion protection:	<i>n.a.</i>
Storage	
▪ Requirements for store rooms and containers:	<i>Store in a cool and dry ventilated place. Ensure correctly labelled.</i>
▪ Storage with other substances:	<i>n.a.</i>
▪ Further details on storage conditions:	<i>n.r.</i>
▪ Storage class:	<i>n.a.</i>
▪ VbF class (regulation on flammable liquids)	<i>n.r.</i>

<b>8 Exposure limits and personal protective equipment</b>				
Additional information for layout of technical equipment:		<i>Exhaust equipment</i>		
Components with limit values for monitoring in the workplace:				
CAS No.	Substance designation	Type	Limit value	Unit
7440-31-5	Tin	UK EH40	OES 2mg/m <sup>3</sup> 8Hr TWA	
7440-50-8	Copper		OES, STEL 4mg/m <sup>3</sup> 15mins	
8050-09-7	Colophony		OES 1mg/m <sup>3</sup> 8Hr TWA	
7440-22-4	Silver		OES, STEL 2mg/m <sup>3</sup> 15mins	
Additional information:		<i>Biological Standards: Under the management of Health and Safety at Work (Amendment) Regulations 1994 employers should assess the risks at work to the health of pregnant workers, those who have recently given birth, or who are currently breast feeding.</i>		
Personal protective equipment:				
General protection and hygiene measures:		<i>Wash hands prior to breaks and at end of work. Engineering solutions should be implemented to prevent or reduce Exposure to soldering fumes and dust. This should include process or personnel enclosure, Mechanical dust and fume extraction to Atmosphere/scrubber. Control of process to reduce or eliminate Emissions. Documented process and safety controls and personnel protection, Gloves, Masks etc.</i>		
▪ Breathing protection		<i>Where there is a high risk to fume and dust ingestion a respirator should be worn.</i>		
▪ Hand protection		<i>Wear rubber gloves.</i>		
▪ Eye protection		<i>Wear safety glasses.</i>		
▪ Body protection		<i>Wear normal industrial workwear, avoid exposed skin.</i>		

<b>9 Physical and chemical properties:</b>			
Form:	<i>Solid at room temperature</i>		
Colour:	<i>Grey metallic</i>		
Odour:	<i>mild</i>		
	<b>Value/range</b>	<b>Unit</b>	<b>Method</b>
Flashpoint:	<i>n.a.</i>		
Ignition point	<i>n.a.</i>		
Viscosity:	<i>n.a.</i>		
Density at 20 °C:	<i>7.40 Approx.</i>	<i>g/cm<sup>3</sup></i>	
Lower Ex-limit:	<i>n.a.</i>		
Upper Ex-limit:	<i>n.a.</i>		

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Solubility in water at 20 °C:	<i>Insoluble</i>	
Change of state:	<i>n.a.</i>	
Melting point:	<i>423-428 °F (217-220 °C) / Flux 172 °F (78 °C)</i>	
Boiling point/range:	<i>662 °F (350 °C)</i>	
Extinguishing agent contents: organic water / Volume of solids	<i>n.a.</i>	
Bulk density:	<i>n.a.</i>	
Vapour pressure at 20 °C:	<i>n.a.</i>	
pH-value at 2%:	<i>n.a.</i>	

<b>10 Stability and reactivity</b>	
Thermal decomposition / conditions to be avoided:	<i>Stable under all normal factory conditions. / None Known</i>
Hazardous reactions:	<i>Solder will react with concentrated Nitric Acid to release Nitric Oxide which will oxidise to Nitrogen Dioxide. Workers exposed to these gases should seek medical attention. Other strong acids may also react in a similar way.</i>
Hazardous decomposition products:	<i>Molten liquid may give fumes. Avoid temps above 500 °C. Heated Colophony gives rise to fumes associated with asthma.</i>

<b>11 Toxicology data</b>	
Acute toxicity:	<i>Can lead to weakness, insomnia, hypertension, headaches and joint pains. Low order of toxicity.</i>
Primary irritant effects:	
▪ On the skin:	<i>May cause skin irritation.</i>
▪ On the eye:	<i>May cause conjunctival irritation, corneal damage and iritis.</i>
▪ Sensory effects	<i>Damage in the blood – forming, nervous, urinary and reproductive systems.</i>
▪ Additional toxicological information:	<i>May cause harm to the unborn child. May impair fertility.</i>

<b>12 Ecological information</b>	
Ecotoxicity	<i>Rated as slightly toxic to Aquatic species.</i>
Degradability and Persistence	<i>Resistant to Bio-degradation.</i>
Bio-accumulation	<i>Has the potential to bio-accumulate.</i>
Mobility	<i>A small portion will dissolve in water, will accumulate in soil.</i>

<b>13 Notes on disposal</b>	
Product:	
▪ Recommendation:	<i>Use up. Dispose of in a Permitted Disposal Site in Accordance with all Federal and Local Disposal Regulations ( special waste regulations).</i>
Waste reference number:	<i>Recommendation: AVV-Code 17 04 06</i>
Waste name:	<i>Other non ferrous metal</i>
Uncleaned packaging:	
▪ Recommendation:	<i>Disposal according to official regulations.</i>
▪ Disposal route:	<i>Waste Disposal</i>

<b>14 Transport data</b>	
<b>Land transport ADR/RID and GGVE (internal/international)</b>	
▪ ADR/RID-GGVS/E Class:	<i>n.a.</i>
▪ Numeric character/letter:	
▪ Kemler number:	
▪ UN number:	
▪ Designation of goods:	
<b>Ocean transport IMDG/GGVSea</b>	
▪ IMDG/GGVSea Class:	<i>n.a.</i>

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<ul style="list-style-type: none"> <li>▪ Page:</li> <li>▪ UN number:</li> <li>▪ Packaging group:</li> <li>▪ EMS number:</li> <li>▪ MFAG:</li> <li>▪ Marine pollutant:</li> <li>▪ Correct technical name:</li> </ul>	
<b>Air transport ICAO-TI and IATA-DGR</b>	
<ul style="list-style-type: none"> <li>▪ ICAO/IATA Class:</li> <li>▪ UN/ID number:</li> <li>▪ Packaging group:</li> <li>▪ Correct technical name:</li> </ul>	<i>n.a.</i>

<b>15</b>	<b>Instructions</b>	
<ul style="list-style-type: none"> <li>▪ Identification to EC directives:</li> <li>▪ Identification letter and hazard designation of product:</li> <li>▪ Hazard components for labelling:</li> <li>▪ R paragraphs:</li> <li>▪ S paragraphs:</li> <li>▪ Special identification special preparations:</li> </ul>		
		<i>irritant</i>
		<i>Xi</i>
		<i>Colophony</i>
		<i>36/37/38 Irritating to eyes, respiratory system and skin 42 May cause sensitisation by inhalation 43 May cause sensitisation by skin contact</i>
		<i>P8 warning contains colophony 2 Keep out of the reach of children. 23 Do not breathe fumes. 24 Avoid contact with skin. 37 Wear suitable gloves. 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).</i>
		<i>n.a.</i>
<b>National regulations</b>		
	Occupational restrictions	<i>n.a.</i>
	Hazardous Incident Ordinance:	<i>n.a.</i>
	VbF Classification (regulation on flammable liquids):	<i>n.a.</i>
	Technical atmospheric instructions:	<i>n.a.</i>
	Water pollution class:	<i>1 (self-assessment)</i>

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16	Other information	
Applicable EC Directives	<i>Dangerous substances Directive 67/548/EEC and amended by Directive 92/32/EEC                      Dangerous Preparations Directive 88/379/EEC and amended by Directive 90/492/EEC                      The control of substances Hazardous to Health Regulations 1994                      The Health and Safety at Work Act 1974                      The Management of Health and Safety at Work Regulations 1992                      The Management of Health and Safety at Work Regulations 1994 as amended                      Chemical (Hazard Information &amp; Packaging for Supply) Regulations CHIP 1997                      An Introduction to Local Exhaust Ventilation HS(G)37                      A Step by Step Guide to the COSHH Regulations HS(G)97</i>	
Applicable EC Directives		
Technical Guidance		
<i>This information is intended for use in the United Kingdom only, as different limits may be set in other countries. Please check with your Local and National Authorities or Supplier.</i>		

**This data is based on our present knowledge.  
 However, it does not constitute a guarantee for any specific product feature and shall not  
 establish a legally valid contractual relationship.**

**Department issuing data sheet: Environmental Protection Department  
 Contact partner: V. Heller**

n.a.	= not applicable
n.c.	= not determined
n.r.	= not required