



5. Juli 2007

Material Safety Data Sheet - according to directive 91/155/EWG

INTERNATIONAL STANDART NORM ISO 11014-1

Trade Name: SU	Solderwire S-Sn60 Pb38 Cu2 DIN EN 29 453	Flux F-SW 34 NF EN 29 454.1																														
1.) Manufacturer: Address:	EDSYN GMBH EUROPA Finkenweg 2 D 97892 Kreuzwertheim																															
	Tel.: 09342 - 6413 Fax: 09342 - 6417																															
2.) COMPOSITION / INFORMATION ON INGREDIENTS 2.1 Hazardous Ingredients: 2.2 Representative hazardous ingredients: :	Labelled with the R-phrases given in section3: see section 16. (Present in the preparation at sufficient concentration to give it the toxicological nature it would have in the 100% pure state). <table border="1" data-bbox="748 947 1500 1129"> <thead> <tr> <th>INDEX</th> <th>CAS</th> <th>CE</th> <th>NAME</th> <th>Symbol</th> <th>R:</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>082-001-006</td> <td></td> <td></td> <td>Lead Compounds Except for those named in this annex</td> <td>TN</td> <td>Repr.Cat. 1/R61 Repr.Cat. 1/R62 XN: R20/22 N: R50/53 R33</td> <td></td> </tr> </tbody> </table> <table border="1" data-bbox="748 1182 1500 1318"> <thead> <tr> <th>Alloys:</th> <th>Codes</th> <th>Concentration</th> <th>R Phrases:</th> </tr> </thead> <tbody> <tr> <td>Tin</td> <td>7440-31-5</td> <td>59.5 to 60.5%</td> <td></td> </tr> <tr> <td>Lead</td> <td>7439-92-1</td> <td>Rest</td> <td>20/22-33-61</td> </tr> <tr> <td>Copper</td> <td>7440-1</td> <td>1.6 to 2%</td> <td></td> </tr> </tbody> </table>		INDEX	CAS	CE	NAME	Symbol	R:	%	082-001-006			Lead Compounds Except for those named in this annex	TN	Repr.Cat. 1/R61 Repr.Cat. 1/R62 XN: R20/22 N: R50/53 R33		Alloys:	Codes	Concentration	R Phrases:	Tin	7440-31-5	59.5 to 60.5%		Lead	7439-92-1	Rest	20/22-33-61	Copper	7440-1	1.6 to 2%	
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3.) HAZARD IDENTIFICATION 3.1 Warning: 3.2 Instability: 3.3 Incompatibility: 3.4 Hazardous products of decomposition: :	This alloy contains lead. Industrial use only. Keep children away. This product ist stable. Avoid contact with basics, acids and oxidizing chemicals. Hazardous reactions with mineral acids: sulfuric acids, phosphoric, nitric (concentred). No hazardous reaction when normally used.																															
4.) FIRST AID MEASURES 4.1 Inhalation: 4.2 Skin: 4.3 Eyes:	Always carry out soldering and melting operations in well ventilated areas to prevent a concentration of fumes higher to the MAC values. Burns: cool affected parts under running water ... Do not remove adhering material, apply a sterile dressing an seek medical advice. May cause sensitisation by skin contact. Immediately flood the eye with plenty of water for at least 15 minutes.																															



5. Juli 2007

<p>4.4 Ingestion:</p>	<p>Obtain medical attention. Do not induce vomiting. Get medical attention. do not give water when unconscious. Keep warm and at rest.</p>
<p>5.) <u>FIRE FIGHTING MEASURES</u></p> <p>5.1 Extinguishing media: 5.2 Unsuitable extinguished media: 5.3 Special fire fighting measures: 5.4 Special protective equipment for firefighting: Risks of exposure an fire:</p>	<p>-CO2 foam – Alcohol resistant foam – Dry powder. Do not use jet of water. None</p> <p>Wear full protective clothing and self-contained breathing.</p>
<p>6.) <u>ACCIDENTAL RELEASE MEASURES</u></p> <p>6.1 Personal precautions: 6.2 Environment precaution:</p> <p>6.3 Measures for cleaning:</p> <p>Other data:</p>	<p>Wear appropriate protective clothing. Residues should be stored in closed containers. Extract fumes. Try to prevent the material from entering drains or water courses. Disposals should be in accordance with local states. Scrapped off the released product, store it in a closed container before throughing it, wash the contaminated surface with an organic solvant or a detergent. Transfer into suitable containers for recovery or disposal. Kühn-Birett Remarks „Hazardous materials“, text B20 „Lead“</p>
<p>7.) <u>HANDLING AND STORAGE</u></p> <p>7.1 Handling: 7.1.1 Personal protective equipment: 7.1.2 Measures for safety handling:</p> <p>7.1.3 Using advices:</p> <p>7.2 Storage: 7.2.1 Conditions of storage and protective equipment: 7.2.2 Incompatible materials: 7.2.3 Conditioning materials: Nature of the recommended packaging: Not advisable:</p> <p>Classification reference:</p>	<p>Wear gloves and eye-protection. Use local exhaust ventilation. Ensure efficient local air ventilation or extraction systems at the workplace. Extract fumes during the melting. Avoid breathing metal fumes from. Make sure that people work in safety conditions. Do not drink, do not smoke in soldering areas. Hazardous reactions with concentrated sulfuric acid, concentrated. Phosphoric acid and concentrated nitric acid. Real risks of lead fumes above 500°C. Lead is harmful if absorbed through the digestive system or skin.</p> <p>Store in a place ambient temperature (20°C-25°C). Avoid sun exposure and heating.</p> <p>Strong oxidizing chemicals.</p> <p>* plastics PP or PE, recyclable polypropylen spools, recyclable containers. * metallic (as aluminium).</p> <p>Page 13 according to VCI-</p>
<p>8.) <u>EXPOSURE CONTROL AND PERSONAL PROTECTION</u></p> <p>8.1 Occupationnal exposure standards:</p> <p>8.2 Personal protective equipment:</p>	<p>According to INRS ND 19456-153-93 et ND 1962-155-94: Ensure appropriate air and vapour extraction/ventilation at the workplace. Fumes and vapours or lead: 0.15 mg/m³ of air</p>



5. Juli 2007

<p>Measures of control:</p> <p>Other measures:</p> <p>8.3 Personal protection: Respiratory protection: Hand protection: Eye protection:</p> <p>Body protection:</p> <p>8.4 General protective and hygienic instructions:</p>	<table border="1"> <thead> <tr> <th>N°CAS</th> <th>Texts</th> <th>Material</th> <th>Values</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>7439-92-1</td> <td>Lead</td> <td>dust</td> <td>0,1</td> <td>mg/m³</td> </tr> <tr> <td>7439-92-1</td> <td>Lead</td> <td>blood</td> <td>700</td> <td>ug/L</td> </tr> <tr> <td></td> <td></td> <td>blood</td> <td>300</td> <td>ug/L (women under 45 years)</td> </tr> </tbody> </table> <p>P2, ensure appropriate air ventilations. Wear PVC or rubber gloves. Use correctly fitting protective goggles. Face shield when handling hot product. Wear appropriate working clothes.</p> <p>Do not eat, do not drink, do not smoke at the workplace. Wash hands thoroughly with water and soap before taking breaks, when finishing work and especially before eating. Keep away from food and beverages.</p>	N°CAS	Texts	Material	Values	Units	7439-92-1	Lead	dust	0,1	mg/m ³	7439-92-1	Lead	blood	700	ug/L			blood	300	ug/L (women under 45 years)
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<p>9.) <u>PHYSICAL AND CHEMICAL PROPERTIES</u></p> <p>9.1 Physical properties</p> <p>Boiling point/range: Boiling point/range: Melting point/range: Density (at 20°C)</p> <p>Powerful reactions an risks of explosion with oxidants, ammonium nitrates and acids</p> <p>9.2 Chemical or incorporated flux</p> <p>Flux Content: Halide Centent: Watersolubility (at°C): Solvent content: Softening point:</p> <p><u>Further Paticulars:</u></p>	<p><u>Binary alloy no. 2 according to NF EN 29453 Standard</u></p> <p>Physical state: wire Colour: silver metal Odour: none</p> <p>(of tin) 2260 °C (of lead) 1740 °C S-Sn60Pb38Cu2 183-190 °C S-Sn60Pb38Cu2 8.5 g/cm³</p> <p><u>No-clean flux according to DIN EN 29454.1 standart type 2.2.3 B</u></p> <p><u>Flux F-SW34</u></p> <p>1.4% 0% insoluble none 80 to 100 °C</p> <p>According to International System ISO 31-8.</p>																				
<p>10.) <u>STABILITY AND REACTIVITY</u></p> <p>Conditions avoid:</p>	<p>No decomposition if used in accordance with the specifications:</p>																				



5. Juli 2007

<p>Materials to avoid:</p> <p>Other particulars:</p>	<p>Powerful oxidizing chemicals.</p>
<p>11.) <u>TOXICOLOGICAL INFORMATION</u></p> <p>Toxicological analyses: Specific Information: Significant remarks: Special remarks: General remarks:</p>	<p>This good is not concerned in its final shape.</p> <p>Possible intoxication by ingestion or by skin contact.</p>
<p>12.) <u>ECOLOGICAL INFORMATION</u></p> <p>Persistence/Degradation:</p> <p>Water pollution:</p> <p>CSB-Values: BSB5: AOX-Data:</p> <p>General indications:</p>	<p>Tin and lead are not biodegradable and cannot be disposed of.</p> <p>Water polluting product: WGK : class 2. Do not allow to reach the ground water, rivers an drains or water courses.</p> <p>mg/g mg/g Containing the chemical formula of heavy metals (refer to Llegal rules 76/464/CEE): About 60 % Tin (Sn) About 38% Lead (Pb) About 2% Copper (Cu).</p> <p>Avoid contamination of ground water with lead..</p>
<p>13.) <u>DISPOSAL</u></p> <p>Product disposal:</p> <p>Waste code number: Container disposal:</p>	<p>The product which ist not used and its wastes can be returned to the manufacturer. Metals should be recovered when possible. N°. 353 02 relative to the waste of lead Dispose of in accordance wirth the official regulations.</p>
<p>14.) <u>TRANSPORT INFORMATION</u></p> <p>RID/ADR – Class: IMDG –Class: IATA – Class: Other regulatory arrangements: RIMO R/F:</p>	<p>Not hazardous product regarding transport Not classified Not classified Not classified none none</p>
<p>15.) <u>REGULATORY INFORMATIONS</u></p> <p>Labelling information: EU guidelines:</p> <p>Documents in accordance to the regulations:</p> <p>Technical instructions for air: Tin:</p>	<p>This product is classified and labelled as hazardous substance. 91/322/EU dated 29 may 1991: EU limit values NF EN 481 NF EN 482</p> <p>INRS 1945-153-93/ revised in february 1995: professional exposure limits values to chemical substances.</p> <p>Emission 5 mg/m³ per 25 g/h mass current. Tin and its derivates belong to class III.</p>

EDSYN GMBH EUROPA

Zentrum für Löt- und Entlötsysteme



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Water hazard class:	2 (water polluting)
16.) <u>OTHER INFORMATION</u>	<p>The relevant data sheet ist applicable here. The information contained herein is based on data considered accurate and is offered at no charge. Our aim, by providing the above information which reflects the current status of our knowledge and experience is to describe our product in terms of safety requirements. Liability is expressly disclaimed for loss or injury arising out of use of this information or the use of any materials designated. Supplementary copies of this data sheet are available on request.</p>