



19. Januar 2005

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

INTERNATIONAL STANDART NORM ISO 11014-1

Trade Name: SUAg2	Solder wire S-Sn62Pb36Ag2 DIN EN 29 453	Flux F-SW 34 NF EN 29 454.1
1.) <u>Manufacturer:</u> <u>Address:</u>	EDSYN GMBH EUROPA Finkenweg 2 D 97892 Kreuzwertheim Tel.: 09342 - 6413 Fax: 09342 - 6417	
2.) <u>COMPOSITIONS / INFORMATION ON THE COMPONENTS</u> 2.1 Description: 2.2 Components:	Ternary alloy Tin/Lead/Silver in solderwires form Alloys: Codes: Concentration: R Phrases: Tin 7440-31-5 61.5 to 62.5% Lead 7439-92-1 Rest 20/22-33-61 Silver 7439-92-1 1.8 to 2.2%	
3.) <u>HAZARD IDENTIFICATION</u> 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 is stable. Avoid contact with basics, acids and oxidizing chemicals. Hazardous reactions with mineral acids: sulfuric acids, phosphoric, nitric (concentrated). No hazardous reaction when normally used.	
4.) <u>FIRST AID MEASURES</u> 4.1 Inhalation: 4.2 Skin: 4.3 Eyes: 4.4 Ingestion:	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. Obtain medical attention. Do not induce vomiting. Get medical attention. Do not give water when unconscious. Keep warm and at rest.	
5.) <u>FIRE FIGHTING MEASURES</u> 5.1 Extinguishing media: 5.2 Unsuitable extinguished media: 5.3 Special fire fighting measures: 5.4 Special protective equipment for fire fighting:	-CO ₂ foam – Alcohol resistant foam – Dry powder. Do not use water jet. None. Wear full protective clothing and self-contained breathing.	



<p>Risks of exposure and fire: Flash point: Temperature of auto-inflammation:</p>																					
<p>6.) <u>ACCIDENTAL RELEASE MEASURES</u></p> <p>6.1 Personal precautions: 6.2 Environment precautions:</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 Recommended packaging:</p> <p>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 heated material. 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>Storage area should be at ambient temperature (20°C-25°C). Avoid sun exposure and heating.</p> <p>Strong oxidizing chemicals.</p> <p>Store in original containers. * plastics PP or PE, recyclable polypropylen spools, recyclable containers.</p> <p>* metallic (as aluminium).</p> <p>Page 13 according to VCI-.</p>																				
<p>8.) <u>EXPOSURE CONTROLS AND PERSONAL PROTECTION</u></p> <p>8.1 Occupational exposure standards:</p> <p>8.2 Personal protective equipment:</p> <p>Control Measures:</p> <p>Other measures:</p>	<p>According to INRS ND 19456-153-93 et ND 1962-155-94: Ensure efficient air and vapour extraction/ventilation at the workplace. Fumes and vapours of lead: 0.15 mg/m³ of air</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>	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>8.3 Personal protection: Respiratory protection: Hand protection: Eye protection:</p> <p>Body protection:</p> <p>8.4 General protective and hygienic instructions:</p>	<p>P2, ensure appropriate air ventilation or extraction systems. Wear PVC or rubber gloves. Use correctly fitting protective goggles. Face shield when handling hot product. Appropriate work wear.</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>																				
<p>9.) <u>PHYSICAL AND CHEMICAL PROPERTIES</u></p> <p>9.1 Physical properties</p> <p>Boiling range/point (°C): Boiling range/point (°C): Melting point: Density (at 20°C)</p> <p>9.2 Chemicals or incorporated flux</p> <p>Flux content: Halide content: I_A Watersolubility (at °C): Solvent content: Softening point:</p> <p><u>Further Particulars:</u></p>	<p><u>Binary alloy n°30 according to NF EN 29453 Standard</u></p> <table border="0"> <tr> <td>Physical state:</td> <td>wire</td> </tr> <tr> <td>Color:</td> <td>silver metal</td> </tr> <tr> <td>Odour:</td> <td>none</td> </tr> <tr> <td>(of tin)</td> <td>2260 °C</td> </tr> <tr> <td>(of lead)</td> <td>1740 °C</td> </tr> <tr> <td>(S-Sn62PbAg2)</td> <td>178-188 °C</td> </tr> <tr> <td>S-Sn62PbAg2</td> <td>8.5 g/cm³</td> </tr> </table> <p><u>No clean flux according to NF EN 29454.1 standart type 1.1.2 B</u></p> <p><u>Flux F-SW34</u></p> <table border="0"> <tr> <td>1.4%</td> </tr> <tr> <td>No</td> </tr> <tr> <td>About 400</td> </tr> <tr> <td>insoluble</td> </tr> <tr> <td>none</td> </tr> <tr> <td>80 to 100°C</td> </tr> </table> <p>According to International System ISO 31-8.</p>	Physical state:	wire	Color:	silver metal	Odour:	none	(of tin)	2260 °C	(of lead)	1740 °C	(S-Sn62PbAg2)	178-188 °C	S-Sn62PbAg2	8.5 g/cm ³	1.4%	No	About 400	insoluble	none	80 to 100°C
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<p>10.) <u>STABILITY AND REACTIVITY</u></p> <p>Conditions to avoid:</p> <p>Materials to avoid:</p> <p>Other particulars:</p>	<p>No decomposition if used in accordance with the specifications.</p> <p>Powerful oxidizing chemicals.</p>																				
<p>11.) <u>TOXICOLOGICAL INFORMATION</u></p> <p>Toxicological analyses: Special remarks: General remarks:</p>	<p>This good is not concerned in its final shape.</p> <p>The possibility of intoxication by ingestion or by skin contact should be considered.</p>																				



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<p>12.) <u>ECOLOGICAL INFORMATION</u></p> <p>Persistence/Degradation: 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. 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</p> <p>Containing the chemical formula of heavy metals (refer to Legal rules 76/464/CEE): About 62 % Tin (Sn), About 2% Silver (Ag), Rest Lead (Pb).</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 is 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 with 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 No Not restricted 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:</p> <p>Water hazard class:</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: Limit values for professional exposure limits to chemical substances. N°27, 1990, 20 p.</p> <p>Lead: Emission 5 mg/m³ per 25 g/h mass current. Lead and its derivates belong to class III.</p> <p>Tin: Emission 5 mg/m³ per 25 g/h mass current. Tin and its derivates belong to class III.</p> <p>2 (pollutive substance of water).</p>
<p>16.) <u>OTHER INFORMATION</u></p>	<p>The relevant data sheet is applicable here. The information contained here in 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>

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