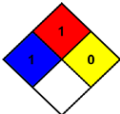



INTERNATIONAL STANDARD NORM ISO 11014-1

EDSYN GMBH EUROPA • D-97892 Kreuzwertheim • Finkenweg 2 • ☎ (09342) 6413 📠 (09342) 6417



05.02.2021

<p>Adverse physicochemical, human health and environmental effects:</p> <p>Other information</p> <p>NFPA code:</p>	<p>No additional information available.</p> <p>1-1-0</p> 
<p>2.2.) Label elements</p> <p>Labelling according to Regulation (EC) No. 1272/2008 [CLP]:</p> <p>Hazard pictograms (CLP)</p> <p>Signal word (CLP)</p> <p>Hazardous ingredients:</p> <p>Hazard statements (CLP)</p> <p>Precautionary statements (CLP):</p> <p>EUH-statements</p>	 <p>GHS08</p> <p>Danger</p> <p>lead, in massive state</p> <p>H360 – May damage fertility or the unborn child. H362 – May cause harm to breast-fed children. H372 – Causes damage to organs through prolonged or repeated exposure.</p> <p>P236 – Avoid contact during pregnancy and while nursing P270 – Do not eat, drink or smoke when using this product P280 – Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>EUH201A – Warning! Contains lead</p>
<p>2.3.) Other hazards</p> <p>This substance/mixture does not meet the PBT criteria of RECH regulation, annex XIII</p> <p>This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII</p> <p>Other hazards not contributing to the classification:</p>	<p>This product may become hazardous in use and the information in this data sheet reflects the hazards associated with solder operations. Increased danger of lead pollution if the metal is overheated or if the metal is oxidized (risk of formation of dust and fumes). Lead oxides are classified as toxic to reproduction (EC). Swallowing of metal alloys is harmful to health.</p>



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3.) <u>COMPOSITION/INFORMATION ON INGREDIENTS</u> 3.1.) Substances 3.2.) Mixture	Not applicable.																														
<table border="1"> <thead> <tr> <th>name</th> <th>Product identifier</th> <th>%</th> <th>Classification according to Regulation (EC) no 1272/2008(CLP)</th> </tr> </thead> <tbody> <tr> <td>tin</td> <td>(CAS No.) 7440-31-5 (EG No. 231-141-8 (REACH No.) 01-2119486474-28</td> <td>*)</td> <td>Not classified</td> </tr> <tr> <td>lead, in massive state</td> <td>(CAS No.) 7439-92-1 (EG No.) 231-100-4 (REACH No.) 01-2119513221-59</td> <td>*)</td> <td>Repr. 1A, H360D Repr. 1A, H360FD Lact., H362 STOT RE 1 H372</td> </tr> <tr> <td>copper</td> <td>(CAS No.) 7440-50-8 (EG No.) 231-159-6 (Reach No) 01-2119480154-42</td> <td>*)</td> <td>Not classified</td> </tr> <tr> <td>flux incorporated</td> <td>-</td> <td>1.4% ± 0.2</td> <td>Not classified</td> </tr> </tbody> </table> <p>Full text of H-statements: see section 16 *) Weight dependent on the respective alloy (see alloy overview).</p> <table border="1"> <thead> <tr> <th>Alloys</th> <th>Tin % wt</th> <th>Lead % wt</th> <th>Silver</th> <th>Copper</th> </tr> </thead> <tbody> <tr> <td>Sn60Pb38Cu2</td> <td>60 ± 0.5</td> <td>Rest</td> <td>-</td> <td>2 ± 0.2</td> </tr> </tbody> </table>	name	Product identifier	%	Classification according to Regulation (EC) no 1272/2008(CLP)	tin	(CAS No.) 7440-31-5 (EG No. 231-141-8 (REACH No.) 01-2119486474-28	*)	Not classified	lead, in massive state	(CAS No.) 7439-92-1 (EG No.) 231-100-4 (REACH No.) 01-2119513221-59	*)	Repr. 1A, H360D Repr. 1A, H360FD Lact., H362 STOT RE 1 H372	copper	(CAS No.) 7440-50-8 (EG No.) 231-159-6 (Reach No) 01-2119480154-42	*)	Not classified	flux incorporated	-	1.4% ± 0.2	Not classified	Alloys	Tin % wt	Lead % wt	Silver	Copper	Sn60Pb38Cu2	60 ± 0.5	Rest	-	2 ± 0.2	
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4.) <u>FIRST AID MEASURES</u> 4.1.) Description of first aid measures First aid measures after inhalation: First aid measures after skin contact: First aid measures after eye contact: First aid measures after ingestion: 4.2.) Most important symptoms and effects, both acute and delayed Symptoms/effects: Symptoms/effects after skin contact: Symptoms/effects after eye contact: Symptoms/effects after ingestion: 4.3.) Indication of any immediate medical attention and special treatment needed	<p>Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.</p> <p>In case of splash from molten metal, wash affected skin areas with copious amounts of running water. Further treatment of the burn.</p> <p>Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.</p> <p>Do not induce vomiting. Give milk to drink. Immediately after ingestion: give lots of water to drink. Consult a doctor/medical service if you feel unwell.</p> <p>Handle in accordance with good industrial hygiene and safety practice.</p> <p>The melted product adheres to the skin and causes burns.</p> <p>In case of splash from hot solder to the eyes and if not removed, may result in serious injury. Vapours produced during soldering operations can give slight irritation of the eye tissue.</p> <p>Symptoms similar to those listed under inhalation, as well damage to the kidneys.</p> <p>No additional information available.</p>																														



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<p>5.) <u>FIREFIGHTING MEASURES</u></p> <p>5.1.) Extinguishing media</p> <p>Suitable extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p>5.2.) Special hazards arising from the substance or mixture</p> <p>Fire hazard:</p> <p>Explosion hazard:</p> <p>Reactivity:</p> <p>5.3.) Advice for firefighters</p> <p>Precautionary measure fire</p> <p>Firefighting instructions</p> <p>Other information (fire fighting):</p>	<p>D powder. Dry sand.</p> <p>Never use water near molten metal.</p> <p>None.</p> <p>DIRECT EXPLOSION HAZARD: No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD: No data available on indirect explosion hazard</p> <p>Upon burning: formation of metallic fumes/vapours.</p> <p>Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows</p> <p>Dilute combustible/toxic gases/vapours with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.</p> <p>Massive metal and the oxides are not combustible.</p>
<p>6.) <u>ACCIDENTAL RELEASE MEASURES</u></p> <p>6.1.) Personal precautions, protective equipment and emergency procedures</p> <p>General measures:</p> <p>6.1.1.) For non-emergency personnel</p> <p>Protective equipment</p> <p>Emergency procedures</p> <p>6.1.2.) For emergency responders</p> <p>6.2.) Environmental precautions</p> <p>6.3.) Methods and material for containment and cleaning up</p> <p>Methods for cleaning up:</p> <p>Other information:</p> <p>6.4.) Reference to other sections</p>	<p>Not applicable for solder wire.</p> <p>Gloves, protective clothing. See "Material Handling" to select protective clothing.</p> <p>Mark the danger area. No naked flames</p> <p>No additional information available.</p> <p>Prevent soil and water pollution. Prevent spreading in sewers.</p> <p>If melted: allow liquid to solidify before taking it up.</p> <p>Upon burning: formation of metallic fumes/vapours.</p> <p>No additional information available.</p>
<p>7.) <u>HANDLING AND STORAGE</u></p> <p>7.1.) Precautions for safe handling</p>	



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Additional hazards when processed:	Vapours produced during soldering operations.
Precautions for safe handling:	Comply with the legal requirements. Avoid breathing fume. Wash hands immediately after handling the product. Observe very strictly hygiene. Avoid contact. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection.
Hygiene measures:	Always wash hands and face immediately after handling this product, and once again before leaving the workplace.
7.2.) Conditions for safe storage, including any incompatibilities	
Maximum storage period:	Unlimited
Storage temperature:	Store at ambient temperature.
Storage area:	Store at ambient temperature. Store in a dry area.
7.3.) Specific end use(s)	
<u>REACH Disclaimer:</u>	This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

8.) <u>EXPOSURE CONTROLS/PERSONAL PROTECTION</u>		
8.1.) Control parameters		
<u>lead, in massive state (7439-92-1)</u>		
EU	IOELV TWA (mg/m ²)	15 mg/m ³ (Inorganic lead and its compounds; EU; Time-weighted average exposure limit 8 h; Binding occupational exposure limit value)
Belgium	Limit value (mg/m ³)	0.15 mg/m ³ (Plomb inorg. (poussières et fumées) (en Pb); Belgium; Time-weighted average exposure limit 8 h)
France	VME (mg/m ³)	0.1 mg/m ³ (Plomb métallique et composés, en Pb; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)
Italy – Portugal – USA ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³ (Lead; USA; Time-weighted average exposure limit 8 h; TLV – Adopted value)
United Kingdom	WEL TWA (mg/m ³)	15 mg/cm ³ Lead other than lead alkyls; United Kingdom; Time-weighted average exposure limit 8 h; Occupational exposure limit (Control of lead at work)

tin (7440-31-5))

EU	IOELV TWA (mg/m ³)	2 mg/m ³
Belgium	Limit value (mg/m ³)	2 mg/m ³
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
Netherlands	Grenswaarde TGG 8h (ppm)	2 ppm

copper (7440-50-8)

Belgium	Limit value (mg/m ³)	0,2 mg/m ³ 1 mg/m ³
France	VME (mg/m ³)	0,2 mg/m ³



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Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m ³)	0,2 mg/m ³
Netherlands	Grenswaarde TGC 8H (mg/m ³)	0,1 mg/m ³ (inhaleerbar)
United Kingdom	WEL TWA (mg/m ³)	0,2 mg/m ³ 1 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³

8.2.) Exposure controls

Appropriate engineering controls:

Solder alloys containing lead do not give lead fumes at normal soldering temperatures, only at t° above 500° C. Provide local exhaust or general room ventilation.

Personal protective equipment:

Gloves. Heat resistant gloves if handling hot metal. Safety glasses.



Hand protection:

The selected protective gloves must meet the specifications of EU Directive 89/686/EEC and EN 374, derived therefrom. In case of repeated or prolonged contact wear gloves. Wear suitable gloves.

Eye protection:

In case of risky circumstances: safety glasses or face shield.

Skin and body protection:

Wear suitable protective clothing and gloves.

Respiratory protection:

Work under local exhaust/ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Consumer exposure controls:

The need for personal protective equipment should be based on a workplace risk assessment for the particular use.

Other information

Do not eat, drink or smoke when using this product. Observe strict hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1.) Information on basic physical and chemical properties

Physical state::

Solid

Appearance:

Solid wire.

Colour:

Silvery-white to grey.

Odour:

Odourless.

Odour threshold:

No data available.

pH:

No data available.

Melting point:

IEC-EN-61190-1-3; Sn60Pb38Cu2; 183°C-191°C

Freezing point:

No data available.

Boiling point:

No data available.

Flash point:

(Flux) 170° C

Relative evaporation rate

(butylacetat=1):

No data available.

Flammability (solid, gas):

No data available.

Explosive limits:

No data available.

Vapour pressure:

No data available.

Relative vapour density at 20° C:

No data available.

Relative density:

8,5g/cm³

Solubility:

8Water: insoluble.

Log Pow:

No data available.



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12.) **ECOLOGICAL INFORMATION**

12.1.) Toxicity

Ecology – general:

Not biodegradable and many therefore not be disposed in the environment.

Ecology – air

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.2/II.

Ecology - water

No water pollutant (surface water). Maximum concentration in drinking water: 0.010 mg/l (lead) (Directive 98/83/EC).

tin (7440-31-5)

LC50 fish 1	> 12.4 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)
LC50 other aquatic organisms 1	10 mg/l (144 h, GAMMARUS SP.)
EC50 Daphnia 1	1,5 mg/l (504 h, DAPHNIA MAGNA)
EC50 other aquatic organisms 1	21.23 mg/l (96 h, TUBIFEX TUBIFEX)
LC50 fish 2	0,42 mg/l (672 h, SALMO GAIARDNERI/ ONCORHYNCHUS MYKISS, METAL ION)
LC50 other aquatic organisms 2	42 mg/l (48 h, DAPHNIA MAGNA)
EC50 other aquatic organisms 2	140.28 mg/l (48 h, TUBIFEX TUBIFEX, METAL ION)
ErC50 (algae)	> 19.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Salt water, Experimental value)

12.2.) Persistence and degradability

lead, in massive state (7439-92-1)

Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available.
ThOD	Not applicable (inorganic)

tin (7440-31-5)

Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable (inorganic).
Chemical oxygen demand (COD)	Not applicable (inorganic).
ThOD	Not applicable.

copper (7440-50-8)

Persistence and degradability	Biodegradability in soil:: not applicable. Biodegradability in soil: not applicable.
Biochemical oxygen demand (BOD)	Not applicable.
Chemical oxygen demand (COD)	Not applicable.
ThOD	Not applicable.
BOD (% of ThOD)	Not applicable.

12.3.) Bioaccumulative potential

lead, in massive state (7439-92-1)

Log Pow	0,73 (estimated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).



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<u>tin (7440-31-5)</u>		
Bioaccumulative potential	Not bioaccumulative.	
<u>copper (7440-50-8)</u>		
Bioaccumulative potential	No bioaccumulation data available.	
12.4.) Mobility in soil	<u>tin (7440-31-5)</u>	
	Ecology – soil	Adsorbs into the soil
	<u>copper (7440-50-8)</u>	
	Ecology – soil	Adsorbs into the soil.
	<u>IF 14-06, IF14-09, IF14-14 Leaded, Halide Free, No-Clean Solder Wire</u>	
	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
	<u>tin (7440-31-5)</u>	
	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
12.5.) Results of PBT- und vPvB assessment		
12.6.) Other adverse effects		
	Other information:	
		Ecological information is not available.
13.) <u>DISPOSAL CONSIDERATIONS</u>		
13.1.) Waste treatment methods		
Regional legislation (waste):		
Product/Packaging disposal recommendation:		
Ecology – waste materials:		
EURAL code		
14.) <u>TRANSPORT INFORMATION</u>		
14.1.) UN number		
UN-No. (ADR)		
UN-No. (IMDG)		
UN-No. (IATA)		
UN-No. (ADN)		
UN-No. (RID)		



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14.2.) UN proper shipping name Proper Shipping Name (ADR) Proper Shipping Name (IMDG) Proper Shipping Name (IATA) Proper Shipping Name (ADN) Proper Shipping Name (RID)	Not applicable Not applicable Not applicable Not applicable Not applicable
14.3.) Transport hazard class(es) ADR Transport hazard class(es) (ADR) IMDG Transport hazard class(es) (IMDG) IATA Transport hazard class(es) (IATA) ADN Transport hazard class(es) (ADN) RID Transport hazard class(es) (RID)	Not applicable Not applicable Not applicable Not applicable Not applicable
14.4.) Packing group Packing group (ADR) Packing group (IMDG) Packing group (IATA) Packing group (ADN) Packing group (RID)	Not applicable Not applicable Not applicable Not applicable Not applicable
14.5.) Environmental hazards Dangerous for the environment Marine pollutant Other information	Not applicable Not applicable No supplementary information available
14.6.) Special precautions for user Overland transport Transport regulations (ADR) Transport by sea Transport regulations (IMDG) Air transport Transport regulations (IATA) Inland waterway transport Rail transport transport regulations (RID)	Not subject Not subject Not subject No data available Not subject
14.7.) Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable Additional rules to be obtained at EDSYN GMBH EUROPA Remark: Above mentioned regulations are in force at the moment of publication of this (SDS) safety data sheet. With reference to possible modification in transport regulations of dangerous goods, we advise you to validity at EDSYN GMBH EUROPA



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<p>15.) <u>REGULATORY INFORMATION</u></p> <p>15.1.) Safety, health and environmental regulations/legislation specific for the substance or mixture</p> <p>15.1.1.) EU Regulations</p> <p>15.1.2.) National regulations</p> <p>Germany</p> <p>Reference to AwSV</p> <p>Storage class (LGK):</p> <p>12th Ordinance Implementing the Federal Immission Control Act – 12.BImSchV</p> <p>15.2.) Chemical safety assessment</p>	<p>Contains no REACH substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substance</p> <p>Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to AwSV, Annex 1)</p> <p>LGK 13 – Non-combustible solids.</p> <p>Is not subjected of the 12. BImSchV (Hazardous Incident Ordinance)</p> <p>Chemical safety assessments for substances in this preparation were carried out.</p>																										
<p>16.) <u>OTHER INFORMATION</u></p> <p>Other information:</p> <p>Full text of H- and EUH-statements:</p> <p>Full text of use descriptors</p> <p>Revision date:</p>	<p>Intrastat code 8311 90 00.</p> <table border="1"> <tr> <td>Lact.</td><td>Reproductive toxicity. Additional category, Effects on or via lactation</td></tr> <tr> <td>Repr. 1A</td><td>Reproductive toxicity, Category 1A</td></tr> <tr> <td>H360</td><td>May damage fertility or the unborn child.</td></tr> <tr> <td>H360D</td><td>May damage the unborn child,</td></tr> <tr> <td>H360FD</td><td>May damage fertility. May damage the unborn child.</td></tr> <tr> <td>H362</td><td>May cause harm to breast-fed children.</td></tr> <tr> <td>H372</td><td>Causes damage to organs through prolonged or repeated exposure</td></tr> <tr> <td>EUH201A</td><td>Warning! Contains lead.</td></tr> </table> <table border="1"> <tr> <td>PC38</td><td>Welding and soldering products, flux products</td></tr> <tr> <td>PC7</td><td>Base metals and alloys</td></tr> <tr> <td>SU0</td><td>Other</td></tr> <tr> <td>SU14</td><td>Manufacture of basic metals, including alloys</td></tr> <tr> <td>SU16</td><td>Manufacture of computer, electronic and optical products, electrical equipment</td></tr> </table> <p>01.10.2019</p>	Lact.	Reproductive toxicity. Additional category, Effects on or via lactation	Repr. 1A	Reproductive toxicity, Category 1A	H360	May damage fertility or the unborn child.	H360D	May damage the unborn child,	H360FD	May damage fertility. May damage the unborn child.	H362	May cause harm to breast-fed children.	H372	Causes damage to organs through prolonged or repeated exposure	EUH201A	Warning! Contains lead.	PC38	Welding and soldering products, flux products	PC7	Base metals and alloys	SU0	Other	SU14	Manufacture of basic metals, including alloys	SU16	Manufacture of computer, electronic and optical products, electrical equipment
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SDS EU REACH (Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



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DISCLAIMER

The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. Because we cannot anticipate or control the many different conditions under which this information and our products may be used, we do not guarantee the applicability or the accuracy of this information or the suitability of our products in any given situation. Users of our products should make their own tests to determine the suitability of each such product for their particular purposes. The products discussed are sold without such warranty, either expressed or implied.

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