



29.07.2015

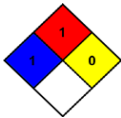
Material Safety Data Sheet - according to Regulation (EC) No. 453/2010

INTERNATIONAL STANDARD NORM ISO 11014-1

Trade name: SUS5	Solder wire Sn60Pb38Cu2 DIN EN 29 453	Flux F-SW 34 NF EN 29 454.1
1.) IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING 1.1.) Product identifier Product form : Trade name : Product code: Other code : 1.2.) Relevant identified uses of the substance or mixture and uses advised against 1.2.1.) Relevant identified uses Main use category: Use of the substance/mixture: 1.2.2.) Uses advised against 1.3.) Details of the supplier of the safety data sheet Manufacturer: Address: 1.4.) Emergency telephone number	Mixture No-Clean Solder wire, F-SW34 Sn60Pb38Cu2 SUS5 Reserved for industrial and professional use. Solder wire No additional information available. EDSYN GMBH EUROPA Finkenweg 2 D - 97892 Kreuzwertheim Tel.: 09342 - 6413 Fax: 09342 – 6417 Emergency number	
2.) HAZARDS IDENTIFICATION 2.1.) Classification of the substance or mixture Classification according to Regulation (EC) no 1272/2008 (CLP): Classification according to Directive 67/548/EEC or 1999/45/EC: Adverse physicochemical, human health and environmental effects:	Not classified. Not classified. Alloys in the form of massive metals do not need to be labelled, even if the substances are classified as dangerous to human and the environment.	



29.07.2015

Other information NFPA code: 2.2.) Label elements Labelling according to Regulation (EC) No. 1272/2008 [CLP]: Precautionary statements (CLP): EUH phrases: 2.3.) Other hazards Other hazards not contributing to the classification:	1-1-0  P273 – Avoid release to the environment. EUH201A – Warning! Contains lead 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.																																								
3.) COMPOSITION/INFORMATION ON INGREDIENTS 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 Directive 67/548/EEC</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>Not classified</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> <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>Not classified</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> *) Weight dependent on the respective alloy (see alloy overview).	name	Product identifier	%	Classification according to Directive 67/548/EEC	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	*)	Not classified	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	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	*)	Not classified	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
name	Product identifier	%	Classification according to Directive 67/548/EEC																																						
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	*)	Not classified																																						
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																																						
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	*)	Not classified																																						
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																																						



29.07.2015

Alloys	Tin % wt	Lead % wt	Silver	Copper
Sn60Pb38Cu2	60 +/- 0.5	Rest	-	2 +/- 0.2

Lead in massive form does not require a label (see section 1.3 of Annex I).

- 1.3.4. Metals in massive form, alloys, mixtures containing polymers, mixtures containing elastomers.
 1.3.4.1. Metals in massive form, alloys, mixtures containing polymers and mixtures containing elastomers do not require a label according to this Annex, if they do not present a hazard to human health by inhalation, ingestion or contact with skin or to the aquatic environment in the form in which they are placed on the market, although classified as hazardous in accordance with the criteria of this Annex*.
 1.3.4.2. . Instead, the supplier shall provide the information to downstream users or distributors by means of the SDS.

***ANNEX I**

CLASSIFICATION AND LABELLING REQUIREMENTS FOR HAZARDOUS SUBSTANCES AND MIXTURES
 Directive 67/548/EEC and 1999/45/EC and amending Regulation (EC) No. 1907/2006.

4.) FIRST AID MEASURES

4.1.) Description of first aid measures

First aid measures after inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First aid measures after skin contact:

In case of splash from molten metal, wash affected skin areas with copious amounts of running water. Further treatment of the burn.

First aid measures after eye contact:

Rinse immediately with plenty of water. Take victim to an ophthalmologist if irritation persists.

First aid measures after ingestion:

Dilute stomach contents with water or milk. Do NOT induce vomiting. Ask for medical advice.

4.2.) Most important symptoms and effects, both acute and delayed

Symptoms/injuries:

Handle in accordance with good industrial hygiene and safety practice.

Symptoms/injuries after skin contact:

The melted product adheres to the skin and causes burns.

Symptoms/injuries after eye contact:

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.

Symptoms/injuries after ingestion:

Symptoms similar to those listed under inhalation, as well damage to the kidneys.

4.3.) Indication of any immediate medical attention and special treatment needed

No additional information available.

5.) FIREFIGHTING MEASURES

5.1.) Extinguishing media

Suitable extinguishing media:

D powder. Dry sand.

Unsuitable extinguishing media:

Never use water near molten metal.



29.07.2015

5.2.) Special hazards arising from the substance or mixture Fire hazard: Reactivity: 5.3.) Advice for firefighters Other information (fire fighting):	None. Upon burning: formation of metallic fumes/vapours. Massive metal and the oxides are not combustible.
6.) <u>ACCIDENTAL RELEASE MEASURES</u> 6.1.) Personal precautions, protective equipment and emergency procedures General measures: 6.1.1.) For non-emergency personnel 6.1.2.) For emergency responders 6.2.) Environmental precautions 6.3.) Methods and material for containment and cleaning up Methods for cleaning up: Other information: 6.4.) Reference to other sections	Not applicable for solder wire. No additional information available. No additional information available. No additional information available. If melted: allow liquid to solidify before taking it up. Upon burning: formation of metallic fumes/vapours. No additional information available.
7.) <u>HANDLING AND STORAGE</u> 7.1.) Precautions for safe handling Additional hazards when processed: Precautions for safe handling: Hygiene measures: 7.2.) Conditions for safe storage, including any incompatibilities Maximum storage period: Storage area: 7.3.) Specific end use(s) <u>REACH Disclaimer:</u>	Vapours produced during soldering operations. Avoid breathing fume. Work under local exhaust/ventilation. Wash hands immediately after handling the product. Always wash hands and face immediately after handling this product, and once again before leaving the workplace. 2 year. Store at ambient temperature. Store in a dry area. 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).



29.07.2015

8.) EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1.) Control parameters

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

The Netherlands	MAC TGG 8H (mg/m ³)	0,15 mg/m ³
-----------------	---------------------------------	------------------------

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

copper (7440-50-8)

Belgium	Limit value (mg/m ³)	0,2 mg/m ³
France	VME (mg/m ³)	0,2 mg/m ³
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m ³)	0,2 mg/m ³
The Netherlands	MAC TGG 8H (mg/m ³)	0,1 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	0,2 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.

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.

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.

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1.) Information on basic physical and chemical properties

Physical state::
Appearance:

Solid
Solid wire.



29.07.2015

Colour: Odour: Odour threshold: pH: Melting point: Freezing point: Boiling point: Flash point: Relative evaporation rate (butylacetat=1): Flammability (solid, gas): Explosive limits: Vapour pressure: Relative vapour density at 20° C: Relative density: Solubility: Log Pow: Log Kow: Self ignition temperature: Decomposition temperature: Viscosity, kinematic: Viscosity, dynamic: Explosive properties: Oxidising properties: 9.2.) Other information Other properties:	Silvery-white to grey. Odourless. No data available. No data available. IEC-EN-61190-1-3; Sn60Pb38Cu2; 183°C-191 No data available. No data available. (Flux) 170° C No data available. No data available. No data available. No data available. No data available. Sn60Pb38Cu2: 8,5g/cm³ Water: insoluble. No data available. No data available. No data available. No data available. No data available. No data available. No data available. No data available. No data available. Insoluble in water. Not soluble in water, so only minimally biodegradable.
10.) <u>STABILITY AND REACTIVITY</u> 10.1.) Reactivity 10.2.) Chemical stability 10.3.) Possibility of hazardous reactions 10.4.) Conditions to avoid 10.5.) Incompatible materials 10.6.) Hazardous decomposition products	Upon burning: formation of metallic fumes/vapours. Stable under normal conditions. No additional information available. High temperatures. Will emit toxic metallic oxides. Slightly reactive with oxidizing agents and strong acids. No additional information available.
11.) <u>TOXICOLOGICAL INFORMATION</u> 11.1.) Information on toxicological effects Acute Toxicity: Skin corrosion/irritation: Serious eye damage/irritation: Respiratory or skin sensitisation: Germ cell mutagenicity: Carcinogenicity: Reproductive toxicity: Specific target organ toxicity (single exposure): Specific target organ toxicity (repeated exposure): Aspiration hazard:	Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified. Not classified.



29.07.2015

12.) ECOLOGICAL INFORMATION

12.1.) Toxicity

Ecological – general:

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

tin (7440-31-5)

LC50 fishes 1	0,42 mg/l (672 h ; Salmo gairdneri (Oncorhynchus mykiss);Metal ion)
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 GAIRDNERI/ 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)

12.2.) Persistence and degradability

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

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

tin (7440-31-5)

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

copper (7440-50-8)

Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil.
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).

tin (7440-31-5)

BCF fish 1	< 0,00036 (Pisces; Dry weight)
------------	---------------------------------

copper (7440-50-8)

Bioaccumulative potential	No bioaccumulation data available.
---------------------------	------------------------------------



29.07.2015

12.4.) Mobility in soil 12.5.) Results of PBT- und vPvB assessment 12.6.) Other adverse effects Other information:	No additional information available. No additional information available. Ecological information is not available.
13.) <u>DISPOSAL CONSIDERATIONS</u> 13.1.) Waste treatment methods Regional legislation (waste): Waste disposal recommendations: Ecology – waste materials:	Disposal must be done according to official regulations. Do not discharge into the sewer. Do not discharge into surface water. Recycle/reuse. Do not discharge into surface water. Do not discharge into the sewer. Recycle/reuse. Packaging containing of or contaminated by dangerous substances. LWCA (the Netherlands): KGA category 05. Hazardous waste (91/689/EEC).
14.) <u>TRANSPORT INFORMATION</u>	No dangerous good in sense of transport regulations. 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 modifications in transport regulations of dangerous goods, we advise you to verify its validity at EDSYN GMBH EUROPA.
15.) <u>REGULATORY INFORMATION</u> 15.1.) Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1.1.) EU Regulations EURAL code: 15.1.2.) National regulations Storage class (LGK): 15.2.) Chemical safety assessment	Contains no REACH candidate substance 10 04 02* LGK 13 – Non-combustible solids. Chemical safety assessments for substances in this preparation were carried out.
16.) <u>OTHER INFORMATION</u> Other information: Version: Revision date:	Intrastat code 8311 30 00 3.0-ED 04.04.2014 / 29.07.2015



29.07.2015

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.

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.

Copyrights reserved to EDSYN GMBH EUROPA