11.05.2018

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

INTERNATIONAL STANDARD NORM ISO 11014-1

Trade name: SU	**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 :	Mixture	
Trade name :	No-Clean Solder wire, F-SW34	
Product code:	Sn60Pb38Cu2	
Other code :	SU	
1.2.) Relevant identified uses of the substance or mixture and uses advised against		
1.2.1.) Relevant identified uses		
Main use category:	Reserved for industrial and professional use.	
Use of the substance/mixture:	Solder wire	
1.2.2.) Uses advised against	No additional information available.	
1.3.) Details of the supplier of the safety data sheet		
Manufacturer: **Address:**	**EDSYN GMBH EUROPA** Finkenweg 2 D - 97892 Kreuzwertheim	 Tel.: 09342 - 6413 Fax: 09342 – 6417
1.4.) Emergency telephone number	Emergency number	
2.) HAZARDS IDENTIFICATION		
2.1.) Classification of the substance or mixture		
Classification according to Regulation (EC) no 1272/2008 (CLP):	Not classified.	
Classification according to Directive 67/548/EEC or 1999/45/EC:	Not classified.	
Adverse physicochemical, human health and environmental effects:	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.	

Other information

NFPA code: 1-1-0

2.2.) Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]:

Precautionary statements (CLP): **P273** – Avoid release to the environment.

EUH phrases: **EUH201A** – Warning! Contains lead

2.3.) Other hazards

Other hazards not contributing to the classification: 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 heath.

3.) COMPOSITION/INFORMATION ON INGREDIENS

3.1.) Substances Not applicable.

3.2.) Mixture

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

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flux incorporated	-	1.4% (+/-0.2)	Not classified

*) Weight dependent on the respective alloy (see alloy overview).

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.

5.2.) Special hazards arising from the substance or mixture	
Fire hazard:	None.
Reactivity:	Upon burning: formation of metallic fumes/vapours.
5.3.) Advice for firefighters	
Other information (fire fighting):	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:	Not applicable for solder wire.
6.1.1.) For non-emergency personnel	No additional information available.
6.1.2.) For emergency responders	No additional information available.
6.2.) Environmental precautions	No additional information available.
6.3.) Methods and material for containment and cleaning up	
Methods for cleaning up:	If melted: allow liquid to solidify before taking it up.
Other information:	Upon burning: formation of metallic fumes/vapours.
6.4.) Reference to other sections	No additional information available.
7.) <u>HANDLING AND STORAGE</u>	
7.1.) Precautions for safe handling	
Additional hazards when processed:	Vapours produced during soldering operations.
Precautions for safe handling:	Avoid breathing fume. Work under local exhaust/ventilation. Wash hands immediately after handling the product.
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:	2 year.
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.) EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1.) Control parameters

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

The Netherlands	MAC TGG 8H (mg/m³)	0,15 mg/m³

tin (7440-31-5))

EU	IOELV TWA (mg/m³)	2 mg/m³
Belgium	Limit value (mg/m³)	2 mg/m³
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m³)	2 mg/m³

copper (7440-50-8)

Belgium	Limit value (mg/m³)	0,2 mg/m³
France	VME (mg/m³)	0,2 mg/m³
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m³)	0,2 mg/m³
The Netherlands	MAC TGG 8H (mg/m³)	0,1 mg/m³
United Kingdom	WEL TWA (mg/m³)	0,2 mg/m³
United Kingdom	WEL STEL (mg/m³)	2 mg/m³

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:: 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
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:	Sn60Pb38Cu2: 8,5g/cm³
Solubility:	Water: insoluble.
Log Pow:	No data available.
Log Kow:	No data available.
Self ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity, kinematic:	No data available.
Viscosity, dynamic:	No data available.
Explosive properties:	No data available.
Oxidising properties:	No data available.
9.2.) Other information	
Other properties:	Insoluble in water. Not soluble in water, so only minimally biodegradable.
10.) STABILITY AND REACTIVITY	
10.1.) Reactivity	Upon burning: formation of metallic fumes/vapours.
10.2.) Chemical stability	Stable under normal conditions.
10.3.) Possibility of hazardous reactions	No additional information available.
10.4.) Conditions to avoid	High temperatures. Will emit toxic metallic oxides.
10.5.) Incompatible materials	Slightly reactive with oxidizing agents and strong acids.
10.6.) Hazardous decomposition products	No additional information available.
11.) TOXICOLOGICAL INFORMATION	
11.1.) Information on toxicological effects	
Acute Toxicity:	Not classified.
Skin corrosion/irritation:	Not classified.
Serious eye damage/irritation:	Not classified.
Respiratory or skin sensitisation:	Not classified.
Germ cell mutagenicity:	Not classified.
Carcinogenicity:	Not classified.
Reproductive toxicity:	Not classified.
Specific target organ toxicity (single exposure):	Not classified.
Specific target organ toxicity (repeated exposure):	Not classified.
Aspiration hazard:	Not classified.

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.

12.4.) Mobility in soil	No additional information available.
12.5.) Results of PBT- und vPvB assessment	No additional information available.
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):	Disposal must be done according to official regulations.
Waste disposal recommendations:	Do not discharge into the sewer. Do not discharge into surface water. Recycle/reuse.
Ecology – waste materials:	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** **<u>Remark:</u>** 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	Contains no REACH candidate substance
EURAL code:	10 04 02*
15.1.2.) National regulations	
Storage class (LGK):	LGK 13 – Non-combustible solids.
15.2.) Chemical safety assessment	Chemical safety assessments for substances in this preparation were carried out.
16.) <u>OTHER INFORMATION</u>	
Other information:	Intrastat code 8311 30 00
Version:	3.0-ED
Revision date:	04.04.2014 / 29.07.2015

11.05.2018

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.

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