Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

Material Safety Data Sheet - according to Regulation 453/2010

INTERNATIONAL STANDARD NORM ISO 11014-1

Trade	e name: SA	Solder wire Sn96,5Ag3,5 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:	Mixture SOLDER WIRE, F-SW-34 Sn96,5Ag3,5 SA	
1.2.)	Relevant identified uses of the substance or mixture and uses advised against		
1.2.1.) Relevant identified uses		
	Main use category:	Industrial 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 Tel.: 09342 - 6413 D 97892 Kreuzwertheim Fax: 09342 - 6417	
1.4.)	Emergency telephone 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:	No additional information available.	
	Other information		
	NFPA-Code:	1-1-0	

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

2.2.) Label elements

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

Precautionary statements (CLP):

P273 – Avoid release to the environment

2.3.) Other hazards

Other hazards not contributing to the classification:

The product is not hazardous as supplied nor is it hazardous when handled under normal conditions. This product may become hazardous in use and the information in this data sheet reflects the hazards associated with solder operations.

3.) COMPOSITION/INFORMATION ON INGREDIENTS

3.1.) Substances

Not applicable.

3.2.) Mixture

name	Product identifier	%	Classification according to Directive 67/548/EEC
tin	(CAS N°) 7440-31-5 (EC N°) 231-141-8 (REACH-no) 01-2119486474-28	*)	Not classified
silver	(CAS N°) 7440-22-4 (EC N°) 231-131-3 (REACH-no) 01-2119555669-21	*)	Not classified
flux incorporated (Type F-SW-34)	-	1.6% (+/-0.2)	Not classified

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^{*)} Weight dependent on the respective alloy (see alloy overview)

alloys	tin % wt	silver % wt	copper % wt
Sn96,5Ag3,5	Rest	3,5 +/-0.2	-

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:

Lead-free solder alloys are not likely to have a harmful effect on the skin. Wash hands immediately after handling the product. In case of splash from molten metal, wash affected skin areas with copious amounts of running water. Further treatment of the burn. Soap may be used. Take victim to a doctor if irritation persists.

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

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	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, irritation 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.
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:	No water spray.
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	
	Protection during firefighting:	Heat resistant gloves. Heat/fire exposure: compressed air/oxygen apparatus.
	Other information (firefighting):	Massive metal and the oxides are not combustible.
6.)	ACCIDENTAL RELEASE MEASURES	
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	Prevent spreading in sewers.
6.3.)	Methods and material for containment and cleaning up	
	Methods for cleaning up:	If melted: allow liquid to solidify before taking it up.

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

	Other information:	Upon burning: formation of metallic fumes/vapours.
6.4.)	Reference to other sections	No additional information available.
7.)	HANDLING AND STORAGE	
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 years
	Storage temperature:	Store at ambient temperature.
	Storage area:	Store in a dry area.
7.3.)	Specific end use(s)	
	REACH Disclaimer:	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

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

silver (7440-22-4)

EU	IOELV TWA (mg/m³)	0,1 mg/m³
Belgium	Limit value (mg/m³)	0,1 mg/m³
France	VME (mg/m³)	0,1 mg/m³
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	0.1 E
Italy-Portugal-USA ACGIH	ACGIH TWA (mg/m³)	0,1 mg/m³
The Netherlands	MAC TGG 8H (mg/m³)	0,1 mg/m³
United Kingdom	WEL TWA (mg/m³)	0,1 mg/m³

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

8.2.) Exposure controls

Personal protective equipment: Safety glasses. Gloves. Heat resistant gloves if handling hot metal.



Hand protection: The selected protective gloves must meet the specifications of EU

Directive 89/686/EEC and EN 374, derived therefrom.

Eye protection: Safety glasses.

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.

Odourless Odourless

Odour threshold:

pH:

No data available.

No data available.

Melting point: IEC-EN-61190-1-3; Sn96,5Ag3,5; 221° C

Freezing point:

Boiling point:

Flash point:

No data available.

No data available.

(Flux) 170° C

Relative evaporation rate

(butylacetate=1):
Flammability (solid, gas);
Explosive limits:
No data available.
No data available.

Vapour pressure:
Relative vapour density at 20 °C:
Relative density:
Solubility:

No data available.
No data available.
Sn96,5Ag3,5: 7.5 g/cm³
Water: Insoluble

Log Pow:

Log Kow:

Self ignition temperature:

Decomposition temperature:

No data available.

No data available.

No data available.

No data available.

Viscosity, kinematic:
Viscosity, dynamic:
Viscosity, dynamic:

Explosive properties:

No data available.

9.2.) Other information No additional information available.

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.

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

10.4.)	Conditions to avoid	High temperatures. Will emit toxic metallic oxides.		
10.5.)	Incompatible materials	No additional information available.		
10.6.)	Hazardous decomposition products	Tin and silver compounds.		
11.)	TOXICOLOGICAL INFORMATION			
11.1.)	Information on toxicological effects			
	Acute toxicity:	Not classified.		
		silver (7440-22-4)		
		LD50 oral rat >1000 mg/kg (rat)		
		LD 50 dermal rat >2000 mg/kg (rat)		
	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			
,	Ecology - general:	The solder wire is not biodegradable and may therefore not be disposed in the environment.		
	Ecology - water:	Flux used for solder wire is readily biodegradable.		
	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		
	2000 11011 2	MYKISS METALION)		
	LC50 other aquatic organisms 2	MYKISS, METAL ION) 42 mg/l (48 h, DAPHNIA MAGNA)		

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

12.2.) Persistence and degradability

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

silver (7440-22-4)

Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil : not applicable. Adsorbs into the soil.	Biodégradabilité : sans objet. Adsorption au sol.
Biochemical oxygen demand (BOD)	Not applicable	Sans objet
Chemical oxygen demand (COD)	Not applicable	Sans objet
ThOD	Not applicable	Sans objet
BOD (% of ThOD)	Not applicable	Sans objet

12.3.) Bioaccumulative

tin (7440-31-5)

BCF fish 1	< 0,00036 (Pisces; Dry weight)	
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silver (7440-22-4)

Bioaccumulative potential Not bioaccumulative.	Bioaccumulative potential	Not bioaccumulative.
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12.4.)	Mobility in soil	No additional information available.
12.5.)	Results of PBT and vPvB assessment	No additional information available.
12.6.)	Other adverse effects/information	No additional information available.
13.)	DISPOSAL CONSIDERATIONS	
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 - LWCA (the Netherlands): KGA category 05.
14.)	TRANSPORT INFORMATION	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.

Zentrum für Löt- und Entlötsysteme



EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

28.03.2022

15.) REGULATORY INFORMATION	
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 08 11
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.) OTHER INFORMATION	
Other information:	Intrastat code 8311 30 00
SDS Version:	7.1/ED
Review date SDS:	06.06.2014 / 11.08.2015

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.

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