EDSYN GMBH EUROPA

Zentrum für Löt- und Entlötsysteme

EDSYN GMBH EUROPA, Postfach 1169, D-97888 Kreuzwertheim

18. August 2017

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Trade name: SAC ALG	**Solder wire Sn96,5 Ag3 Cu0,5 with aluminium flux**
1.) IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1.) Product identifier	
Trade name :	soldering wire
Registration number (REACH):	not relevant (mixture)
CAS number:	not relevant (mixture)
1.2.) Relevant identified uses of the substance or mixture and uses advised against	
Relevant identified uses:	Solder
1.3.) Details of the supplier of the safety data sheet	
Supplier: Address:	**EDSYN GMBH EUROPA** Finkenweg 2 Tel. 09342 - 6413 D 97892 Kreuzwertheim Fax: 09342 – 6417
1.4.) Emergency telephone number	As above or next toxicological information centre.
2.) HAZARDS IDENTIFICATION	
2.1.) Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008 (CLP):	This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.
2.2.) Label elements	
Labelling according to Regulation (EC) No 1272/2008 (CLP):	not required
2.3.) Other hazards	There is no additional information.
3.) COMPOSITION/INFORMATION ON INGREDIENTS	
3.1.) Substances	Not relevant (mixture)

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3.2.) Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS				
Name of substance	**Identifier**	**Wt%**	**Classification acc. to GHS**	**Pictograms**
Tin	CAS No 7440-31-5 EC No 231-141-8	≥ 50		
Silver	CAS No 7440-22-4 EC No 231-131-3	≤ 10		
Copper	CAS No 7440-50-8 EC No 231-159-6	≤ 10		

4.)	**FIRST AID MEASURES**	
4.1.)	**Description of first aid measures**	
	General notes:	In all cases of doubt, or when symptoms persist, seek medical advice.
	Following inhalation:	Provide fresh air.
	Following skin contact:	Wash with plenty of soap and water.
	Following eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Following ingestion:	Rinse mouth. Do not induce vomiting. Get medical advice/attention if you feel unwell.
	Notes for the doctor:	none
4.2.)	**Most important symptoms and effects, both acute and delayed**	Symptoms and effects are not known to date.
4.3.)	**Indication of any immediate medical attention and special treatment needed**	none

5.)	**FIREFIGHTING MEASURES**	
5.1.)	**Extinguishing media**	
	Suitable extinguishing media:	dry sand, use metal fire powder to extinguish.
	Unsuitable extinguishing media:	water
5.2.)	**Special hazards arising from the substance or mixture**	Hazardous decomposition products: Section 10.
	Hazardous combustion products:	nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO_2)

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5.3.) Advice for firefighters	In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.
Special protective equipment for firefighters:	Self-contained breathing apparatus (EN 133)
6.) <u>ACCIDENTAL RELEASE MEASURES</u>	
6.1.) Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel:	Ventilate affected area. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.
For emergency responders:	Wear breathing apparatus if exposed to vapours/dust/spray/gases.
6.2.) Environmental precautions	Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.
6.3.) Methods and material for containment and cleaning up	
Advices on how to contain a spill:	take up mechanically.
Advices on how to clean up a spill:	take up mechanically.
Other information relating to spills and releases:	Place in appropriate containers for disposal. Ventilate affected area.
6.4.) Reference to other sections	Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.
7.) <u>HANDLING AND STORAGE</u>	
7.1) Precautions for safe handling	
Measures to prevent fire as well as aerosol and dust generation:	Use local and general ventilation.
Specific notes/details:	None.
Measures to protect the environment:	Avoid release to the environment.
Advice on general occupational hygiene:	Do not to eat, drink and smoke in work areas. Wash hands after use. Preventive skin protection (barrier creams/ointments) is recommended. Remove contaminated clothing and protective equipment before entering eating areas.

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7.2.)	**Conditions for safe storage, including any incompatibilities**	
	Flammability hazards:	None.
	Incompatible substances or mixtures:	Incompatible materials: see section 10.
	Protect against external exposure, such as:	none.
	Consideration of other advice:	Keep away from food, drink and animal feedingstuffs.
	Ventilation requirements:	Provision of sufficient ventilation.
	Packaging compatibilities:	Keep only in original container.
7.3.)	**Specific end use(s)**	No information available.

8.) **EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1.) **Control parameters** — No data available.

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Source
EU	silver	7440-22-4		IOELV		0,1			2000/39/EC
EU	tin	7440-31-5		IOELV		2			91/322/EEC
GB	silver	7440-22-4		WEL		0,01			EH40/2005
GB	copper	7440-50-8	dm	WEL		1		2	EH40/2005
GB	copper	7440-50-8	fume	WEL		0,2			EH40/2005

Notation:

dm as dusts and mists

fume as fume

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified.

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

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Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
TIN	7440-31-5	DNEL	133,3 mg/kg	human, dermal	worker (industry)	acute – systemic effects
Tin	7440-31-5	DNEL	11,75 mg/m³	human, inhalatory	worker (industry)	acute – systemic effects
Tin	7440-31-5	DNEL	133,3 mg/kg	human, dermal	worker (industry)	chronic – systemic effects
Tin	7440-31-5	DNEL	11,75 mg/m³	human, inhalatory	worker (industry)	chronic – systemic effects
Silver	7440-22-4	DNEL	0,1 mg/m³	human, inhalatory	worker (industry)	chronic – systemic effects
Copper	7440-50-8	DNEL	1 mg/m³	human, inhalatory	worker (industry)	acute – local effects
Copper	7440-50-8	DNEL	273 mg/kg	human, dermal	worker (industry)	acute – systemic effects
Copper	7440-50-8	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute – systemic effects
Copper	7440-50-8	DNEL	1 mg/m³	human, inhalatory	worker (industry)	chronic – local effects
Copper	7440-50-8	DNEL	137 mg/kg	human, dermal	worker (industry)	chronic – systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Silver	7440-22-4	PNEC	0,04 µg/l	aquatic organisms	freshwater	short-term (single instance)
Silver	7440-22-4	PNEC	0,86 µg/l	aquatic organisms	marine water	short-term (single instance)
Silver	7440-22-4	PNEC	0,025 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Silver	7440-22-4	PNEC	438,1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Silver	7440-22-4	PNEC	438,1 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Silver	7440-22-4	PNEC	1,41 mg/kg	terrestrial organisms	soil	short-term (single instance)
Copper	7440-50-8	PNEC	7,8 µg/l	aquatic organisms	freshwater	short-term (single instance)

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Relevant PNECs of components of the mixture						
Name of substance	**CAS No**	**Endpoint**	**Threshold level**	**Organisms**	**Environmental compartment**	**Exposure time**
Copper	7440-50-8	PNEC	5,2 µg/l	aquatic organisms	marine water	short-term (single instance)
Copper	7440-50-8	PNEC	230 µg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Copper	7440-50-8	PNEC	87 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Copper	7440-50-8	PNEC	676 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Copper	7440-50-8	PNEC	65 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2.) Exposure controls

Appropriate engineering controls:	General ventilation.
Individual protection measures (personal protective equipment)	
Eye-/ face protection:	Wear eye / face protection.
Hand protection:	Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. Wear protective gloves against thermal risks (heat and/or fire).
Respiratory protection:	In case of formation of gases/vapours/mists.
Thermal hazards:	Wear protective gloves against thermal risks (heat and/or fire). Wear protective clothing for protection against heat and flame.
Environmental exposure controls:	Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

9.) PHYSICAL AND CHEMICAL PROPERTIES

9.1.) Information on basic physical and chemical properties

Appearance

Physical state:	solid
Form:	solid matter
Colour:	according to product specification
Odour:	odourless
Odour threshold:	these information are not available.

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Other safety parameters	
pH (value):	these information are not available.
Melting point / freezing point:	these information are not available.
Initial boiling point and boiling range:	these information are not available.
Flash point:	not applicable.
Evaporation rate:	these information are not available.
Flammability (solid, gas):	non-flammable
Explosion limits of dust clouds:	not determined
Vapour pressure:	these information are not available.
Density:	these information are not available.
Vapour density:	these information are not available.
Relative density:	these information are not available.
Solubility(ies)	
Water solubility:	not miscible in any proportion.
Partition coefficient	
n-octanol/water (log KOW):	these information are not available.
Auto-ignition temperature:	these information are not available.
Decomposition temperature:	these information are not available.
Viscosity	not relevant
Kinematic viscosity:	these information are not available.
Dynamic viscosity:	these information are not available.
Explosive properties:	not explosive.
Oxidising properties:	shall not be classified as oxidising.
10.) STABILITY AND REACTIVITY	
10.1.) Reactivity	This material is not reactive under normal ambient conditions.
10.2.) Chemical stability	The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
10.3.) Possibility of hazardous reactions	No known hazardous reactions.
10.4.) Conditions to avoid	There are no specific conditions known which have to be avoided.
10.5.) Incompatible materials	There is no additional information.
10.6.) Hazardous decomposition products	Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

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11.) TOXIKOLOGICAL INFORMATION

11.1.) Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP): This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Acute toxicity: Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Tin	7440-31-5	oral	LD50	>2.000 $^{mg}/_{kg}$	rat
Tin	7440-31-5	inhalation: dust/mist	LC50	>4,75 $^{mg}/_{l}$/4h	rat
Tin	7440-31-5	dermal	LD50	>2.000 $^{mg}/_{kg}$	rat
Silver	7440-22-4	oral	LD50	>5.110 $^{mg}/_{kg}$	rat
Silver	7440-22-4	dermal	LD50	>2.000 $^{mg}/_{kg}$	rat

Skin corrosion/irritation: Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation: Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation: Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity: Shall not be classified as germ cell mutagenic.

Carcinogenicity: Shall not be classified as carcinogenic.

Reproductive toxicity: Shall not be classified as a reproductive toxicant.

Specific target organ toxicity – single exposure: Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity – repeated exposure: Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard: Shall not be classified as presenting an aspiration hazard.

12.) ECOLOGICAL INFORMATION

12.1.) Toxicity

Aquatic toxicity (acute): Test data are not available for the complete mixture.

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Aquatic toxicity (acute) of components of the mixture

Aquatic toxicity (acute) of components of the mixture					
Name of substance	**CAS No**	**Endpoint**	**Value**	**Species**	**Exposure time**
Tin	7440-31-5	LC50	>12,4 µg/l	fish	96 hours
Tin	7440-31-5	ErC50	>19,2 µg/l	algae	72 hours
Tin	7440-31-5	EC50	>19,2 µg/l	algae	72 hours
Silver	7440-22-4	LC50	1,2 µg/l	fish	96 hours

Aquatic toxicity (chronic): **I** Test data are not available for the complete mixture.

Aquatic toxicity (chronic) of components of the mixture

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	**CAS No**	**Endpoint**	**Value**	**Species**	**Exposure time**
Tin	7440-31-5	EC50	1.303 µg/l	aquatic invertebrates	7 d
Tin	7440-31-5	LC50	>3.200 µg/l	aquatic invertebrates	7 d
Silver	7440-22-4	EC50	0,8 µg/l	aquatic invertebrates	7 d

12.2.) Persistence and degradability	
Biodegradation:	Data are not available.
Persistence:	Data are not available.
12.3.) Bioaccumulative potential	Data are not available.
12.4.) Mobility in soil	Data are not available.
12.5.) Results of PBT- and vPvB assessment	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
12.6.) Other adverse effects	Data are not available.
Endocrine disrupting potential:	None of the ingredients are listed.
Remarks	
Water hazard class – WHC (Wassergefährdungsklasse):	1 (Slightly hazardous to water).
13.) DISPOSAL CONSIDERATIONS	
13.1.) Waste treatment methods	Dispose of contents/container in accordance with local/regional/national/ international regulations.

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Sewage disposal-relevant information:	Do not empty into drains.
Waste treatment of containers/ packagings:	Handle contaminated packages in the same way as the substance itself.
Remarks	Please consider the relevant national or reginal provisions.
14.) TRANSPORT INFORMATION	
14.1.) UN- number	Not subject to transport regulations.
14.2.) UN proper shipping name	-
14.3.) Transport hazard class(es)	
Class:	-
14.4.) Packing group	-
14.5.) Environmental hazards	-
14.6.) Special precautions for user	There is no additional information.
14.7.) Transport in bulk according to Annex II of MARPOL- and the IBC-Code	The cargo is not intended to be carried in bulk.
15.) Regulatory information	
15.1.) Safety, health and environmental regulations/legislation specific for the substance or mixture	
Relevant provisions of the European Union (EU)	
Restrictions according to REACH, Annex XVII:	none of the ingredients are listed.
List of substances subject to authorisation (REACH, Annex XIV):	none of the ingredients are listed.

VOC-Deco-Paint Directive 2004/42/EC

VOC content	0 %

Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	0 %

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Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) – Annex II:	none of the ingredients are listed.

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR):

Pollutant release and transfer registers (PRTR)			
Name of substance	**CAS No**	**Remarks**	**Threshold for releases to air (kg/year)**
Copper	7440-50-8	(8)	100

Legend

(8) All metals shall be reported as the total mass of the element in all chemical forms present in the release.

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD):	none of the ingredients are listed.
Explosives precursors which are subject to restrictions:	none of the ingredients are listed.

16.) OTHER INFORMATION

Indication of changes (revised safety data sheet)

Indication of changes:	Section 8

Abbreviations and acronyms

Abbreviations and acronyms	
Abbr.	**Descriptions of used abbreviations**
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC
91/322/EEC	Commission Directive on establishing indicative limit values by implementing Council Directive 80/1107/EEC
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)

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Abbreviations and acronyms	
Abbr.	**Descriptions of used abbreviations**
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	danger
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/)
GHS	„Globally Harmonized System of Classification and Labelling of Chemicals“ developed by the United Nations
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods Code
Index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of “Marine Pollutant”)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

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Key literature references and sources for data	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No 1907/2006 (REACH), amended by 2015/830/EU. Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA)
Classification procedure	Physical and chemical properties. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
Revisions date:	19.01.2016 / 14.12.2016 / 07.02.2017
Version number:	2.0

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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