	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 1 of 9

1. Substance / Preparation and Company Identification

1.1 Substance / Preparation Identification

1.1.1 Product Name

Silver Brazing alloys, supplied as coated rods, with following codes:

Code	DIN 8513	EN 1044	AWS A5.8-92	ISO 17672
Ag60Sn	L-Ag60Sn	AG 101	-	-
Ag56Sn	L-Ag55Sn	AG 102	BAG-7	Ag 156
Ag55Sn	L-Ag55Sn	AG 103	-	Ag 155
Ag45Sn	L-Ag45Sn	AG 104	BAG-36	Ag 145
Ag40Sn	L-Ag40Sn	AG 105	BAG-28	Ag 140
Ag38Sn	-	-	BAG-34	Ag 138
Ag34Sn	L-Ag34Sn	AG 106	-	Ag 134
Ag30Sn	L-Ag30Sn	AG 107	-	Ag 130
Ag25Sn	L-Ag25Sn	AG 108	BAG-37	Ag 125

1.2 Relevant identified uses of substance / preparation and uses advised against

1.2.1 Sector of use

SU3: Industrial uses: end uses of substances as such or of preparations at industrial sites.

1.2.2 Product category

PC38: Welding and soldering products(with flux coatings or flux cores), flux products.

1.3 Company identification

Company Name:

STELLA SRL

Address:

Via Marconi, 26

City and Country:

21041 ALBIZZATE (VA) - ITALY

Telephone no.:

+39 - 0331 - 985787

Fax no.:

+39 - 0331 - 985803

Web:


www.stella-welding.com

E-mail of person responsible
of Safety Data Sheet:

info@stella-welding.com

1.4 Emergency phone number

+39 - 0331 - 985787

	MATERIAL SAFETY DATA SHEET	Doc. Rev. No.: 05/15
	According to 1907/2006/CE	Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys Coated Rods	Printed: 10/05/2015 Page no: 2 of 9

2. Hazards Identification

2.1 Classification according to European Regulation no. 1272/2008/EC

HAZARD CLASS: Acute Tox. 3; Skin Corr. 1B; Eye Irrit. 2; Repr.1B
 SIGNAL WORD: Danger
 HAZARD STATEMENT: H301: Toxic if swallowed.
 H314: Causes severe skin burns and eye damage.
 H319: Causes serious eye irritation.
 H360FD: May damage fertility or the unborn child.


2.2 Classification according to European Directives No. 67/548/EC and 1999/45/EC

CLASSIFICATION: T; C, Repr. Cat. 2
 DANGER INDICATIONS: Toxic, Corrosive
 RISK PHRASES R: R25: Toxic if swallowed.
 R34: Causes burns.
 R60: May impair fertility.
 R61: May cause harm to the unborn child.

2.3 Label elements according to European Regulation no. 1272/2008/EC



GHS PICTOGRAM: GHS06; GHS05; GHS07
 SIGNAL WORD: Danger
 PRECAUTIONARY STATEMENT: PREVENTION: P264: Wash hands thoroughly after Handling.
 P270: Do not eat, drink or smoke when using this product.
 P260: Do not breathe dust / fumes.
 P280: Wear protective gloves/protective clothing/eye protection/face protection.
 P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 P281: Use personal protective equipment as required.
 RESPONSE: P301+P310: If swallowed Immediately call a poison center or doctor/physician.
 P330: Rinse mouth.
 P301+P330+P331: if swallowed: Rinse mouth. Do not induce vomiting.
 P303+P361+P353: if on skin (or hair): remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 3 of 9

P363: Wash contaminated clothing before reuse.

P304+P340: If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310: Immediately call a poison center or doctor/physician.

P305+P351+P338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P308+P313: If exposed or concerned: Get medical advice/attention.

P337+P313: If eye irritation persists get medical advice/attention.

STORAGE

P405: Store locked up.

DISPOSAL:

P501: Dispose of contents according to local regulations.

Contains:

Boric acid (SVHC Substance).

Potassium hydrogendifluoride.

2.4 Label elements according to European Directives No. 67/548/EC and 1999/45/EC



CLASSIFICATION:

T; C, Repr. Cat. 2

DANGER INDICATIONS:

Toxic, Corrosive

RISK PHRASES R:

R25: Toxic if swallowed.

R34: Causes burns.

R60: May impair fertility.

R61: May cause harm to the unborn child.

SAFETY PHRASES S:

S1/2: Keep locked up and out of the reach of children.

S22: Do not breathe dust.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37: Wear suitable gloves.


S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S53: Avoid exposure - obtain special instructions before use.

Contains:

Boric acid (SVHC Substance).

Potassium hydrogendifluoride.

	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 4 of 9

2.5 Other information

Prevent exposure to and inhalation of fumes that are generated during brazing operations, by means of mechanical ventilation and/or protective masks. Workers must wear and properly maintain all personal protective equipments supplied, and comply with safety procedures and information. Workers, prior of starting brazing and soldering operations, must be aware of safety procedures to be followed, and must strictly observe those procedures. Body of worker should be protected by appropriate clothes. Brazing and soldering operations may present the risk of generation of dangerous metal oxides and metal vapours and fumes (small particles with approx dimensions of millimetres).

3. Composition / Information on ingredients

The product is composed by a silver-alloy rod covered on the external surface by a layer of deoxidant flux.

Silver-alloy rod composition:


Substance	CAS no.	CE no.	Conc. %	Classification	
				67/548/EC	1272/2008/EC
Silver / Ag	7440-22-4	231-131-3	25 <= C <= 60	--	--
Copper/ Cu	7440-50-8	231-159-6	21 <= C <= 40	--	--
Zinc / Zn	7440-66-6	231-175-3	14 <= C <= 33	--	--
Tin / Sn	7440-31-5	231-141-8	2 <= C <= 5	--	--

De-oxidant flux composition:

Substance	CAS no.	CE no.	Conc. %	Classification	
				67/548/EC	1272/2008/EC
Dipotassium tetraborate	1332-77-0	215-575-5	5 < C < 15	--	--
Boric Acid (*)	10043-35-3	233-139-2	30 < C < 50	Repr. Cat. 2 T R60; R61	Repr. 1B H360FD
Potassium hydrogen difluoride	7789-29-9	232-156-2	10 < C < 30	T R25 C R34	Acute Tox. 3 H301 Skin Corr. 1B H314
Potassium tetrafluoroborate	14075-53-7	237-928-2	20 < C < 40	Xi R36	Eye Irrit. 2A H319

(*): SVHC substance.

See section 16. of this data sheet for complete description of R and H Risk Phrases.

	MATERIAL SAFETY DATA SHEET	Doc. Rev. No.: 05/15
	According to 1907/2006/CE	Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys Coated Rods	Printed: 10/05/2015 Page no: 5 of 9

4. First Aid Measures

Inhalation (fumes and dusts):

Irritant for the respiratory system.

Remove person from danger area and supply fresh air.

If symptoms persist, consult a doctor. If exposed person is unconscious, keep in a stable position, on one side, during transportation.

Inhalation of excessive quantities of zinc-oxide and/or copper-oxide fumes may cause metal-oxide fever. Symptoms are similar to flu-symptoms and may appear even after a delay of 10 hours. Normally symptoms disappear after 24 hours.

Ingestion:

Toxic if swallowed.

Wash mouth thoroughly and call immediately a doctor.

Skin contact:

In case of contact with hot or molten product, follow general first-aid measures.

Eye contact:

Wash with thoroughly with lots of water for some minutes and call a doctor.

5. Fire Fighting measures

General information:

Cool the product with cold water to prevent decomposition and formation of potential hazardous substances.

Always wear complete fire-fighting equipment.

Collect water used for fire extinction and do not release it in drainage systems.

Dispose of contaminated water used for fire extinction as per local laws and regulations.

6. Accidental Release Measures

Avoid the product from being released in drainage systems, in superficial waters, in ground waters, in confined areas.


7. Handling and Storage

Handling:

Do not smoke, eat and/or drink on workplace during handling and use.

Storage:

Store in a dry and well aerated place, locked-up and out of the reach of children.

	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 6 of 9

8. Exposure Controls / Personal Protection

8.1 Exposition Limit Values

Silver:	TLV: 0,1 mg/m ³
Copper fumes:	TLV: 0,2 mg/m ³
Zinc-oxide fumes:	TLV: 5,0 mg/m ³
Tin:	TLV: 2,0 mg/m ³

8.2 Exposure Controls

Use of proper technical and safety measures must always be followed.
Keep workplace well ventilated, by means of mechanical air extraction and/or systems for release of exhaust air. If this means are not sufficient to keep the concentration of product below the exposure limit values, wear an appropriate breathing mask.

Personal protective equipments must comply with the following standards.
Product must be used in closed-loop circuits, or in very well ventilated areas, with strong localized air extraction systems, otherwise it is compulsory to use the prescribed personal protective equipments always in well ventilated areas.

BREATHING PROTECTION

If workplace exposure limit values are exceeded, and when no localized air-extraction is available, always wear a breathing mask with ABEK2P3 type filter for gases, vapours and powders (ref. EN 141).
The use of breathing protection equipments (such as proper masks with cartridges for vapours, dusts and powders) is anyway necessary when no technical means of limiting worker's exposure are used. Remind however that protection level offered by masks is limited.
For high workplace concentration values, or in emergency, or when exposure levels are unknown, wear a compressed-air, open-circuit, autonomous respiratory system (ref. EN 137), or an external air-intake respiratory system, to be used with a full-face mask, a half mask, or a snorkel (ref. EN 138).

HAND PROTECTION


Protect hands with work gloves type Laminate LCT Film (ref. EN 374).
For optimal work-gloves choice, consider: degradation, rupture time, permeation. Gloves have a wear life that varies with length of exposure.

EYES PROTECTION

Wear sealed safety glasses with side protection (ref. EN 166).

SKIN PROTECTION

Wear waterproof, long-sleeved work-suit, and waterproof, professional use, safety shoes (ref. EN 344).
Wash with water and soap after having removed work clothes.
Wash clothes before re-using.
Provide an emergency shower and an emergency eye-washing system.

	MATERIAL SAFETY DATA SHEET	Doc. Rev. No.: 05/15
	According to 1907/2006/CE	Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys Coated Rods	Printed: 10/05/2015 Page no: 7 of 9

9. Physical and Chemical Properties

Physical State: solid
Melting point: alloy: between 620 and 760 °C
(dependent on alloy)

10. Stability and Reactivity

Product is stable in normal conditions of use and storage.
In case of fire or thermal decomposition fumes dangerous for human health are produced (zinc oxide).

11. Toxicological Information

Acute effects: exposition to fumes is dangerous for worker's health, causing fast poisoning by exposition to metal oxides; may be harmful for skin absorption and for ingestion.
For product inhalation, poisoning can be displayed by various symptoms, such as: eyes, mouth, nose, and throat ache and irritation, cough, difficulty in breathing, dizziness, vertigo, nausea and vomiting.
In worst cases, inhalation may cause: inflammation and edema of larynx and of bronchi, chemical pneumonia and pulmonary edema, increase or decrease of heartbeat, excessive salivation or blood sputum, loss of consciousness, behaviour disorders (depression or euphoria).
Brazing fumes may cause irritation of eyes and skin.

12. Ecological Information


N/A

13. Disposal Considerations

Do not dispose of in the environment.

14. Transport Information

LAND (ADR / RID):
UN Number: 1811 POTASSIUM HYDROGEN DIFLUORIDE
Class: 8 Corrosive Substances
Packaging group: II
Labels: 8 + 6.1 (corrosive + toxic)
Name: Potassium hydrogendifluoride, solid, mixture
Packing instructions: P0002
Limited quantity: 1 kg

	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 8 of 9

SEA (IMDG) :

UN Number: 1811 POTASSIUM HYDROGEN DIFLUORIDE
 Class: 8 Corrosive Substances
 Packaging group: II
 Labels: 8 + 6.1 (corrosive + toxic)

AIR (IATA) :

UN Number: 1811 POTASSIUM HYDROGEN DIFLUORIDE
 Class: 8 Corrosive Substances
 Packaging group: II
 Labels: 8 + 6.1 (corrosive + toxic)

15. Regulatory Information

Presence of a SVHC substance (Boric Acid).

16. Other Information

Complete Description of R and H Phrases cited in Section 3.:


H360FD	May damage fertility or the unborn child.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
R25	Toxic if swallowed.
R34	Causes burns
R36	Irritating to eyes.
R60	May impair fertility.
R61	May cause harm to the unborn child

REVISIONS:

This document supersedes the document rev. no. 04/14 dated 20 April 2015.
 Updated sections: 2.1 - 2.3.

BIBLIOGRAPHY:

1. Directive 1999/45/CE and subsequent modifications
2. Directive 67/548/CEE and subsequent amendments and modifications(XXX adapting to technical progress)
3. Regulation (CE) 1907/2006 of European Parliament(REACH)
4. Regulation (CE) 1272/2008 of European Parliament
5. The Merck Index. Ed. 10
6. Handling Chemical Safety
7. Niosh - Registry of Toxic Effects of Chemical Substances
8. INRS - Fiche Toxicologique
9. Patty - Industrial Hygiene and Toxicology
10. N.I. Sax - Dangerous properties of Industrial Materials-7 Ed., 1989

	MATERIAL SAFETY DATA SHEET		Doc. Rev. No.: 05/15
	According to 1907/2006/CE		Date: May 2015
	Silver-Copper-Zinc-Tin Brazing Alloys		Printed: 10/05/2015
	Coated Rods		Page no: 9 of 9

Note for user:

Information contained in this Data Sheet are based on the knowledge available to us at the date of last document revision. Users should verify the suitability and completeness of information with regard to specific use the product. No data contained in this Data Sheet may be regarded as an assurance of any particular specific property of product. As end use of product is not under our direct control, it is the user's responsibility to fully comply with laws and regulations applicable in safety and hygiene. We do not take any responsibility for any un-proper use of product.