

Version 3.1 (21/11/2018) - Page 1/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

#### SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2015/830)

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product name: LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER

Product code: FILS RES SN-PB-AG.

Alloy type: Sn5Pb93.5Ag1.5 (300 Ag) - Sn27Pb70Ag3 - Sn60Pb37Ag3 - Sn62Pb36Ag2

Incorporated flux type: A0 - A11 - CR - CT2 - EL - ESM - F45 - R1 - R45 - RD - RJ10 - RL - RMAS A - RSNB - RT15

# 1.2. Relevant identified uses of the substance or mixture and uses advised against

Soft soldering

## Use descriptor system (REACH):

SU 3 Industrial uses: uses of substances as such or in preparations at industrial sites PC 38 Welding and soldering products (with flux coatings or flux cores), flux products

# 1.3. Details of the supplier of the safety data sheet

Registered company name: MBO.

Address: Rue de la Fonderie.21800.Chevigny-Saint-Sauveur.FRANCE.

Telephone: 00 33 3 80 46 12 58. Fax: 00 33 3 80 46 66 59.

admin@mbosolder.com www.mbosolder.com

# 1.4. Emergency telephone number: +33 (0)1 45 42 59 59.

Association/Organisation: INRS / ORFILA http://www.centres-antipoison.net.

# **SECTION 2 : HAZARDS IDENTIFICATION**

## 2.1. Classification of the substance or mixture

## In compliance with EC regulation No. 1272/2008 and its amendments.

Reproductive toxicity, Category 1A (Repr. 1A, H360).

Reproductive toxicity, Effects on or via lactation (Lact., H362).

Specific target organ toxicity (repeated exposure), Category 1 (STOT RE 1, H372).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

### 2.2. Label elements

# In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms:



GHS08

Signal Word : DANGER

Product identifiers:

EC 231-100-4 LEAD

Additional labeling:

For professional use only.

Hazard statements:

H360FD May damage fertility. May damage the unborn child.

H362 May cause harm to breast-fed children.



Version 3.1 (21/11/2018) - Page 2/14

**MBO** 

# LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER - FILS RES SN-PB-AG

H372 Causes damage to organs through prolonged or repeated exposure .

Precautionary statements - Prevention:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Other information:

#### 2.3. Other hazards

The mixture contains substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

It is recommended to wear safety glasses, protective gloves, to wash hands after use and to work with a good ventilation of area, and suitable fumes extraction system locally installed.

The product could cause burns during soldering.

Its use during soldering may produce or release fumes which can be sensitizing for the respiratory system to asthmatics.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

# 3.2. Mixtures

## **Composition:**

Identification	(EC) 1272/2008	Note	%
CAS: 7440-31-5	(EC) 12/2/2008	[1]	4.00 - 62.00 %
EC: 231-141-8		[1]	4.00 - 02.00 70
REACH: 01-2119486474-28-0033			
REACH. 01-2117480474-26-0033			
TIN			
CAS: 7439-92-1	GHS08	[1]	34.00 - 93.00 %
EC: 231-100-4	Dgr	[2]	
REACH: 01-2119513221-59-XXXX	Repr. 1A, H360FD	[6]	
	Lact., H362		
LEAD	STOT RE 1, H372		
CAS: 7440-22-4	,	[1]	1.40 - 2.00 %
EC: 231-131-3			
REACH: 01-2119555669-21-0025			
SILVER			
CAS: 65997-06-0			0.00 - 3.00 %
EC: 266-041-3			
REACH: 01-2119487113-41-0000			
MODIFIED ROSIN			
CAS: 124-04-9	GHS07	[1]	0.00 - 1.00 %
EC: 204-673-3	Wng		
REACH: 01-2119457561-38-0000	Eye Irrit. 2, H319		
ADIPIC ACID			
(F.11.4 CH 1 4' 16)	•	•	•

(Full text of H-phrases: see section 16)

# **Information on ingredients:**

- [1] Substance for which maximum workplace exposure limits are available.
- [2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.
- [6] Substances of very high concern (SVHC).



Version 3.1 (21/11/2018) - Page 3/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

### SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

#### 4.1. Description of first aid measures

#### In the event of exposure by inhalation:

Take affected persons into fresh air. If irritation persists, get medical attention.

#### In the event of splashes or contact with eves:

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

#### In the event of splashes or contact with skin:

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation persists, get medical attention.

If burns should occur from molten metal, treat for burn and get medical assistance if necessary.

#### In the event of swallowing:

Seek medical attention, showing the label.

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

No data available.

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

No data available.

# **SECTION 5: FIREFIGHTING MEASURES**

Non-flammable.

## 5.1. Extinguishing media

## Suitable methods of extinction

In the event of a fire, use:

- dry chemical agents
- sprayed water or water mist
- dry sand

## Unsuitable methods of extinction

In the event of a fire, do not use:

- water jet
- Foam

#### 5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed:

- metal oxides, metal dust

Molten metal reacts violently with oxidising agents.

### 5.3. Advice for firefighters

Wear full body protective clothing and appropriate self-contained breathing apparatus.

Cool adjacent containers with water spray.

# SECTION 6: ACCIDENTAL RELEASE MEASURES

# 6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

# For non first aid worker

Keep persons without protective equipment away from danger area.



Version 3.1 (21/11/2018) - Page 4/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

#### For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

#### 6.2. Environmental precautions

Prevent any material from entering drains or waterways.

### 6.3. Methods and material for containment and cleaning up

Retrieve the product by mechanical means (sweeping/vacuuming).

#### 6.4. Reference to other sections

No data available.

### SECTION 7: HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Avoid exposure to pregnant women and warn women of child-bearing age of the possible risks

### 7.1. Precautions for safe handling

Always wash hands after handling.

The workplace must be ventilated and fumes must be captured at the emission source.

Due to its high density, the product is heavy. Avoid the fall of the product.

Wear protective shoes and gloves.

### Fire prevention:

Prevent access by unauthorised personnel.

#### Recommended equipment and procedures:

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

# Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

# 7.2. Conditions for safe storage, including any incompatibilities

No data available.

# Storage

On spool, in original cardboard, at room temperature, keep away from inclemency. During 12 months.

Do not store with food products.

## **Packaging**

Always keep in packaging made of an identical material to the original.

## 7.3. Specific end use(s)

No data available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

# 8.1. Control parameters

# Occupational exposure limits:

- European Union (2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

CAS	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Notes:
7440-22-4	0.1	-	-	-	-

# - ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010):

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
7440-31-5	2 mg/m3				
7439-92-1	0.05 mg/m3	-	-	-	-
7440-22-4	0.1 mg/m3	-	-	-	-
124-04-9	5 mg/m3				

# - Germany - AGW (BAuA - TRGS 900, 29/01/2018) :

CAS	VME:	VME:	Excess	Notes
7440-22-4		0,1 E mg/m <sup>3</sup>		8(II)
124-04-9		2 E mg/m <sup>3</sup>		2(I)



Version 3.1 (21/11/2018) - Page 5/14

MBO

# LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER - FILS RES SN-PB-AG

- France (INRS - ED984:2016):

CAS	VME-ppm:	VME-mg/m3:	VLE-ppm:	VLE-mg/m3:	Notes:	TMP No:		
7439-92-1	-	0.15	-	-	-	1		
7440-22-4	-	0.1	-	-	-	-	-	

- UK / WEL (Workplace exposure limits, EH40/2005, 2011):

CAS	TWA:	STEL:	Ceiling:	Definition:	Criteria:
7440-22-4	- ppm	- ppm			
	$0.1 \text{ mg/m}^3$	- mg/m <sup>3</sup>			

# Derived no effect level (DNEL) or derived minimum effect level (DMEL):

ADIPIC ACID (CAS: 124-04-9)

**Final use:** Workers. Exposure method: Inhalation.

Potential health effects: Short term local effects.

DNEL: 5 mg of substance/m3

MODIFIED ROSIN (CAS: 65997-06-0)

Final use: Workers.
Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 17 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.
DNEL: 117 mg of substance/m3

Final use: Man exposed via the environment.

Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 10 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 10 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.
DNEL: 35 mg of substance/m3

SILVER (CAS: 7440-22-4)

Final use: Workers.

Exposure method: Inhalation.

Potential health effects: Long term systemic effects.

DNEL: 0.1 mg of substance/m3

Final use: Consumers.

Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 1.2 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Long term systemic effects. DNEL: 0.04 mg of substance/m3



Version 3.1 (21/11/2018) - Page 6/14

MBO

# LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER - FILS RES SN-PB-AG

TIN (CAS: 7440-31-5)

**Final use:**Exposure method:
Workers.
Dermal contact.

Potential health effects: Short term systemic effects.

DNEL: 133.3 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 133.3 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Short term systemic effects. DNEL: 11.75 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term systemic effects. DNEL: 11.75 mg of substance/m3

Final use: Consumers.

Exposure method: Ingestion.

Potential health effects: Short term systemic effects.

DNEL: 80 mg/kg body weight/day

Exposure method: Ingestion.

Potential health effects: Long term systemic effects.

DNEL: 80 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Short term systemic effects.

DNEL: 80 mg/kg body weight/day

Exposure method: Dermal contact.

Potential health effects: Long term systemic effects.

DNEL: 80 mg/kg body weight/day

Exposure method: Inhalation.

Potential health effects: Short term systemic effects. DNEL: 3.476 mg of substance/m3

Exposure method: Inhalation.

Potential health effects: Long term systemic effects. DNEL: 3.476 mg of substance/m3

## Predicted no effect concentration (PNEC):

ADIPIC ACID (CAS: 124-04-9)

Environmental compartment: Soil.

PNEC: 0.0228 mg/kg

Environmental compartment: Fresh water. PNEC: 0.126 mg/l

 $\begin{array}{ll} \mbox{Environmental compartment:} & \mbox{Sea water.} \\ \mbox{PNEC:} & \mbox{0.0126 mg/l} \end{array}$ 



Version 3.1 (21/11/2018) - Page 7/14

**MBO** 

# LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

MODIFIED ROSIN (CAS: 65997-06-0)

Environmental compartment: Soil.

PNEC: 0.00045 mg/kg

Environmental compartment: Fresh water. PNEC: 0.0016 mg/l

Environmental compartment: Sea water.
PNEC: 0.00016 mg/l

Environmental compartment: Intermittent waste water.

PNEC: 0.016 mg/l

Environmental compartment: Fresh water sediment.

PNEC: 0.007 mg/kg

Environmental compartment: Marine sediment. PNEC: 0.0007 mg/kg

Environmental compartment: Waste water treatment plant.

PNEC: 1000 mg/l

SILVER (CAS: 7440-22-4)

Environmental compartment: Soil.

PNEC: 0.794 mg/kg

Environmental compartment: Fresh water. PNEC :  $0.04 \mu g/l$ 

Environmental compartment: Sea water. PNEC: 0.86 µg/l

Environmental compartment: Fresh water sediment. PNEC: 438.13 mg/kg

Environmental compartment: Marine sediment. PNEC: 438.13 mg/kg

Environmental compartment: Waste water treatment plant. PNEC :  $25 \ \mu g/l$ 

LEAD (CAS: 7439-92-1)

Environmental compartment: Soil.
PNEC: 212 mg/kg

Environmental compartment: Fresh water. PNEC : 3.1  $\mu$ g/l

Environmental compartment: Sea water. PNEC: 3.5

Environmental compartment: Fresh water sediment.

PNEC: 174 mg/kg

Environmental compartment: Marine sediment.



Version 3.1 (21/11/2018) - Page 8/14

MBO

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

PNEC: 164.2 mg/kg

Environmental compartment: Waste water treatment plant.

PNEC: 0.1 mg/l

### 8.2. Exposure controls

#### Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):







Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

# - Eye / face protection

Avoid contact with eyes.

Before handling powders or dust emission, wear mask goggles in accordance with standard EN166.

#### - Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended:

- cotton

#### - Body protection

Suitable type of protective clothing:

- protective work clothing
- protective shoes

After contact with the product, all parts of the body that have been soiled must be washed.

## - Respiratory protection

Avoid breathing dust.

Independent breathing apparatus for respiratory protection:

It is recommended to set up a fumes exhaust system closer to their emission. In case of insufficient ventilation, wear suitable respiratory equipment. In case of formation of vapors, wear suitable respiratory equipment with filter.

### - Thermal risks

The product could cause burns during soldering.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

# 9.1. Information on basic physical and chemical properties

# **General information:**

Physical state: Solid.

# Important health, safety and environmental information

pH: Not relevant.

Boiling point/boiling range: Not specified.

Flash point interval: Not relevant.

Vapour pressure (50°C): Not relevant.

Density: > 1
Water solubility: Insoluble.
Melting point/melting range: Not specified.
Self-ignition temperature: Not specified.
Decomposition point/decomposition range: Not specified.



Version 3.1 (21/11/2018) - Page 9/14

# **MBO**

#### 9.2. Other information

Density (Sn5Pb93.5Ag1.5 (300Ag)): 10.9 @ 20°C

Density (Sn27Pb70Ag3): 9.85 @ 20°C Density (Sn60Pb37Ag3): 8.5 @ 20°C Density (Sn62Pb36Ag2): 8.5 @ 20°C

Solidus / Liquidus temperature (Sn5Pb93.5Ag1.5 (300Ag)) : 296°C / 301°C

LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

Solidus / Liquidus temperature (Sn27Pb70Ag3) : 179°C / 253°C Solidus / Liquidus temperature (Sn60Pb37Ag3) : 178°C / 232°C Solidus / Liquidus temperature (Sn62Pb36Ag2): 178°C / 180°C

Acid number (A0): 235 - 265 mgKOH/g Acid number (A11): 110 - 150 mgKOH/g Acid number (CHV2): 205 - 235 mgKOH/g Acid number (CR): 205 - 235 mgKOH/g Acid number (CT2): 185 - 215 mgKOH/g Acid number (EL): 245 - 275 mgKOH/g Acid number (ESM): 200 - 260 mgKOH/g Acid number (F45): 190 - 210 mgKOH/g Acid number (R1): 195 - 225 mgKOH/g Acid number (R45): 290 - 330 mgKOH/g Acid number (RD): 165 - 185 mgKOH/g Acid number (RL): 170 - 190 mgKOH/g Acid number (RSNB): 240 - 280 mgKOH/g

Acid number (RT 15): 371 - 401 mgKOH/g Chloride content (A0): no chlorine Chloride content (A11): 1 - 1.2 % Chloride content (CHV2): 0.9 - 1.1 % Chloride content (CR): 0.9 - 1.1 % Chloride content (CT2): 0.35 - 0.45 % Chloride content (EL): no chlorine Chloride content (ESM): 1 - 1.5 % Chloride content (F45): 0.25 - 0.35 % Chloride content (R1): no chlorine Chloride content (R45): no chlorine Chloride content (RD): 1.15 - 1.45 % Chloride content (RL): 0.65 - 0.85 % Chloride content (RSNB): no chlorine Chloride content (RT 15): no chlorine Acid number (RJ10): 158 mgKOH/g

### **SECTION 10: STABILITY AND REACTIVITY**

Chloride content (RJ10): 0.9 - 1.1 %

# 10.1. Reactivity

The product is stable under normal conditions of use and storage, but reacts with strong oxidisers.

# 10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

# 10.3. Possibility of hazardous reactions

Reaction with strong oxidizers.

# 10.4. Conditions to avoid

Avoid:

- formation of dusts

Dusts can form an explosive mixture with air.



Version 3.1 (21/11/2018) - Page 10/14

**MBO** 

# LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER - FILS RES SN-PB-AG

## 10.5. Incompatible materials

The product reacts with strong acids, especially with oxidisers acids.

#### 10.6. Hazardous decomposition products

No hazardous decomposition under normal conditions of use.

## **SECTION 11 : TOXICOLOGICAL INFORMATION**

## 11.1. Information on toxicological effects

Known human reproductive toxicant.

May damage fertility and the unborn child.

Presents a risk on or via lactation.

Causes severe damage to organs in the event of repeated or prolonged exposure.

# 11.1.1. Substances

Acute toxicity:

ADIPIC ACID (CAS: 124-04-9)

Oral route : LD50 = 5560 mg/kg

Species: Rat

 $Dermal\ route: LD50 > 7940\ mg/kg$ 

Species: Rabbit

Inhalation route (n/a): LC50 > 7.7 mg/l

Species : Rat

Duration of exposure : 4 h

MODIFIED ROSIN (CAS: 65997-06-0)

Oral route : LD50 > 5000 mg/kg

Species: Rat

Dermal route : 2,000 < LD50 <= 5000 mg/kg

Species : Rat

SILVER (CAS: 7440-22-4)

Oral route : 2000 < LD50 <= 5000 mg/kg

Species: Rat

Dermal route : 2,000 < LD50 <= 5000 mg/kg

Species: Rat

Inhalation route (n/a): LC50 = 5.16 mg/l

Species : Rat

Duration of exposure : 4 h

TIN (CAS: 7440-31-5)

 $Oral\ route: \qquad \qquad 2000 < LD50 <= 5000\ mg/kg$ 

Species: Rat

 $Dermal \ route: \qquad \qquad 2,000 < LD50 <= 5000 \ mg/kg$ 

Species: Rat

Inhalation route (n/a): LC50 > 4.75 mg/l

Species: Rat

Duration of exposure : 4 h



Version 3.1 (21/11/2018) - Page 11/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

Skin corrosion/skin irritation:

SILVER (CAS: 7440-22-4)

Corrosivity: No observed effect.

Germ cell mutagenicity:

MODIFIED ROSIN (CAS: 65997-06-0)

Mutagenesis (in vitro): Negative.

Species: Bacteria

With or without metabolic activation.

SILVER (CAS: 7440-22-4)

No mutagenic effect.

Carcinogenicity:

SILVER (CAS: 7440-22-4)

Carcinogenicity Test: Negative.

No carcinogenic effect.

Reproductive toxicant:

Lead may cause adverse reproductive effects

SILVER (CAS: 7440-22-4) No toxic effect for reproduction

 $Specific \ target \ organ \ systemic \ toxicity \ \hbox{-} \ repeated \ exposure : }$ 

MODIFIED ROSIN (CAS: 65997-06-0)

Species: Rat

Duration of exposure: 90 days

## 11.1.2. Mixture

## Acute toxicity:

No adverse health effect is expected under normal conditions of use.

## Skin corrosion/skin irritation:

May cause skin irritation in case of flux projections or fumes during soldering. It is recommended to wear cotton gloves to prevent burns by projections.

### Serious damage to eyes/eye irritation:

May cause eye irritation due to the fumes during soldering.

# Respiratory or skin sensitisation:

Its use during soldering may produce or release fumes which can be sensitizing for the respiratory system to asthmatics.

# Monograph(s) from the IARC (International Agency for Research on Cancer):

CAS 7439-92-1 : IARC Group 2B : The agent is possibly carcinogenic to humans.

# **SECTION 12 : ECOLOGICAL INFORMATION**

#### 12.1. Toxicity

Do not allow product to reach ground water, water source or sewage system.

## 12.1.1. Substances

TIN (CAS: 7440-31-5)

Crustacean toxicity: EC50 = 1.303 mg/l

Species: Ceriodaphnia dubia

MODIFIED ROSIN (CAS: 65997-06-0)

Crustacean toxicity: EC50 = 726 mg/l



Version 3.1 (21/11/2018) - Page 12/14

MBO

# LEAD RESIN SOLDER WIRES: TIN - LEAD - SILVER - FILS RES SN-PB-AG

Species : Daphnia sp. Duration of exposure : 48 h

SILVER (CAS: 7440-22-4)

Fish toxicity: NOEC = 0.13 mg/l

Species : Menidia beryllina Duration of exposure : 28 days

Crustacean toxicity: NOEC = 0.001 mg/l

Duration of exposure: 7 days

Algae toxicity: NOEC = 0.0012 mg/l

Duration of exposure: 14 days

ADIPIC ACID (CAS: 124-04-9)

Fish toxicity: LC50 > 1000 mg/l

Species : Brachydanio rerio Duration of exposure : 96 h

Crustacean toxicity: EC50 = 46 mg/l

Species : Daphnia magna Duration of exposure : 48 h

**12.1.2.** Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

ADIPIC ACID (CAS: 124-04-9)

Biodegradability: Rapidly degradable.

MODIFIED ROSIN (CAS: 65997-06-0)

Biodegradability: Rapidly degradable.

12.3. Bioaccumulative potential

12.3.1. Substances

SILVER (CAS: 7440-22-4)

Bioaccumulation : BCF = 70

ADIPIC ACID (CAS: 124-04-9)

Octanol/water partition coefficient : log Koe = 0.093

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.



Version 3.1 (21/11/2018) - Page 13/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

# SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

#### 13.1. Waste treatment methods

Do not pour into drains or waterways.

#### Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

#### Soiled packaging:

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

### **SECTION 14: TRANSPORT INFORMATION**

Exempt from transport classification and labelling.

14.1. UN number

-

14.2. UN proper shipping name

-

14.3. Transport hazard class(es)

-

14.4. Packing group

-

14.5. Environmental hazards

-

14.6. Special precautions for user

\_

# **SECTION 15: REGULATORY INFORMATION**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2018/669 (ATP 11)

- Container information:

No data available.

 $Usage\ restrictions\ apply\ to\ the\ product: See\ annex\ XVII\ of\ EC\ regulation\ No.\ 1907/2006.$ 

For professional users only.

- Particular provisions :

No data available.

15.2. Chemical safety assessment

No data available.



Version 3.1 (21/11/2018) - Page 14/14

**MBO** 

### LEAD RESIN SOLDER WIRES: TIN-LEAD-SILVER-FILS RES SN-PB-AG

### **SECTION 16: OTHER INFORMATION**

We cannot anticipate any and all conditions and situations under which the information and our products or the combination of both with others will be used. We do not assume any liability in the safety and suitability of our products alone or in combination with others. Users must make their own tests to determine the safety and suitability of each product used alone or with other products for their own use.

Except any previous written agreement, our products are sold without guarantee and customers must assume all liability for any loss or damage suffered by themselves or by third parties, either from handling or use of our products alone or with others. In case of any difference or variation seen during the use of the products we request that you contact our technical department.

### Wording of the phrases mentioned in section 3:

H319 Causes serious eye irritation.

H360FD May damage fertility. May damage the unborn child.

H362 May cause harm to breast-fed children.

H372 Causes damage to organs through prolonged or repeated exposure .

#### **Abbreviations:**

DNEL: Derived No-Effect Level

PNEC: Predicted No-Effect Concentration CMR: Carcinogenic, mutagenic or reprotoxic.

ADR: European agreement concerning the international carriage of dangerous goods by Road.

IMDG: International Maritime Dangerous Goods. IATA: International Air Transport Association. ICAO: International Civil Aviation Organisation

RID: Regulations concerning the International carriage of Dangerous goods by rail.

GHS08: Health hazard

PBT: Persistent, bioaccumulable and toxic. vPvB: Very persistent, very bioaccumulable. SVHC: Substances of very high concern.