

Material & Safety Data Sheet

According to 1907/2006/EC

Document : Solder Paste **SIRIUS 1 LF Di**

Created date: 01/12/2014 – Updated date: - Revision number: 00

ISO 11014-1

(1194-F)

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1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

- Trade name: Solder Paste **SIRIUS 1 LF Di**
- Available alloys: **Sn42Bi57Ag1**
- Application of the substance/preparation: Soft soldering
- Manufacturer: **M.B.O.**
Rue de la Fonderie
21806 CHEVIGNY-SAINT-SAUVEUR CEDEX
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2- HAZARDS IDENTIFICATION:

-- **Hazard description:**

The product is not classified as dangerous.

-- **Information concerning particular hazards for human and environment:**

The use of the product during soldering may produce or release fumes which can be sensitizing to asthmatic workers.

The product could cause burns during soldering.

-- **Prevention:**

It is necessary to wear protective gloves.

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

-- **GHS label elements:**

None

3- COMPOSITION/INFORMATION ON INGREDIENTS:

Product composition: Mixture of 87% powder and 13% flux					
Flux	N° CAS	N° EC	Phrases R	Phrases S	%
Modified rosin	-	-	-	-	20-100
Powder	N° CAS	N° EC	Phrases R	Phrases S	%
Tin	7440-31-5	231-141-8	-	-	42
Bismuth	7440-69-9	231-177-4	-	-	57
Silver	7440-22-4	231-131-3	-	-	1

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4- FIRST AID MEASURES:

-- **General information:**

Take affected persons out into the fresh air.
Take affected persons out of danger area and lay down.

-- **After inhalation:**

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

-- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.
If skin irritation persists, get medical attention.

-- **After eye contact:**

Rinse opened eye for several minutes under running water.
Get medical attention if irritation occurs.

-- **After swallowing:**

Call for a doctor immediately.
Do not induce vomiting unless directed to do so by medical personnel.

5- FIRE-FIGHTING MEASURES:

-- **Suitable extinguishing agents:**

Dry powder or CO₂.

-- **Extinguishing agents to avoid:**

Do not use water jet on fire where molten metal is present.

-- **Special hazards caused by the substance, its products of combustion or resulting gases:**

Molten metal produces fumes or vapours that may be sensitizing to asthmatic persons.
Molten metal reacts violently with oxidising agents.

-- **Protective equipment:**

Wear appropriate self-contained breathing apparatus.
Do not inhale combustion gases.
Wear full body protective clothing.

6- ACCIDENTAL RELEASE MEASURES:

-- **Person-related safety precautions:**

Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust.
Ensure adequate ventilation.

-- **Measures for environmental protection:**

Do not allow to enter sewers/ surface or ground water.

-- **Measures for cleaning/collecting:**

After cooling, collect the released product and store it in sealed containers.

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-- **Additional information:**

Exposure levels indicated in section 8 are relevant to these and other operations.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7- **HANDLING AND STORAGE:**

- **Handling:**

S37 = Wear suitable gloves.

Wash hands after handling.

- **Storage:**

In original packaging at low temperature (5 to 10°C).

Keep packaging well closed and away from humidity.

8- **EXPOSURE CONTROLS/PERSONAL PROTECTION:**

- **Exposure control:**

Permissible air concentration (mg/m³)

Product	OEL	REL	TLV
Tin	2.0	2.0	2.0
Bismuth	No limits set by OSHA	No limits set by NIOSH	No limits
Silver	0.01	0.01	0.1

Additional information:

PEL = Permissible exposure limit (OSHA)

REL = Recommended exposure limit (NIOSH)

TLV = threshold Limit value (ACGIH)

OSHA= Occupational Safety and Health Administration

ACGIH= American Conference of Governmental Industrial Hygienists

NIOSH= National Institute for Occupational Safety and Health

-- **Personal protective equipment:**

-- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals: do not smoke and eat at work place.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes.

Avoid contact with the eyes and skin.

-- **Respiratory protection:**

Suitable fumes extraction system must be locally installed.

In case of insufficient ventilation, wear a suitable respiratory protective mask.

-- **Protection of hands:**

Gloves are necessary.

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- Eye protection:

Safety glasses are recommended.

-- Body protection:

Protective work clothing is recommended : cotton blouse.

9- PHYSICAL AND CHEMICAL PROPERTIES:

- Form: Paste

Alloy composition	Tin %	Bismuth %	Silver %	Solidus	Liquidus
Sn42Bi57Ag1	42	57	1	E 138°C	

- **Density:** > 1
- **Solubility:** Alcohol
- **pH:** N/A
- **Flash point:** > 100°C
- **Auto-ignition:** > 350 °C

10- STABILITY AND REACTIVITY:

- Stability:

Stable under normal conditions of use and storage.

- Conditions to avoid:

Strong oxidisers may cause violent reaction.

- Hazardous decomposition products:

No hazardous decomposition under normal conditions of use.

11- TOXICOLOGICAL INFORMATION:

- Ingestion :

Massive ingestion could cause gastrointestinal, kidneys, nervous and blood disorders. It is necessary to wear protective gloves.

- Eye contact :

May cause eye irritation due to the fumes during soldering.

- Skin contact :

May cause skin sensitization if prolonged contact with skin. It is necessary to wear protective gloves.

- Inhalation:

Use of product during soldering may produce or release fumes due to heated rosin, which can be sensitizing to asthmatic workers.

- Acute toxicity:

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

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12- ECOLOGICAL INFORMATION:

- General notes:

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

13- DISPOSAL CONSIDERATIONS:

- Product:

Recommendation:

Disposal must be made according to official regulations.

- Uncleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

14- TRANSPORT INFORMATION:

- DOT regulations:

Hazard class: -Not regulated.

- Land transport ADR/RID (cross-border):

ADR/RID class: -Not regulated.

- Maritime transport IMDG:

IMDG Class: -Not regulated.

- Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: -Not regulated.

15- REGULATORY INFORMATION:

The product does not require any hazard warning label in accordance with EC directives/French regulations on dangerous substances.

16- OTHER INFORMATION:

This material safety data sheet is entirely written in accordance with regulations in force.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Reglement internationale concernent le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

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GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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