

M a t e r i a l   S a f e t y   D a t a   S h e e t

**LFSOLDER TLF-204F-171AK**

Date Prepared : July.10 , 2018  
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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : LFSOLDER TLF-204F-171AK

MANUFACTURE

Company Name : TAMURA CORPORATION  
Address : 16-2, Sayamagahara, Iruma-shi, Saitama, 358-8501, Japan  
Phone Number : +81-4-2934-6131  
Emergency Phone Number : +81-4-2934-6134  
FAX Number : +81-4-2934-6559

2. HAZARDS IDENTIFICATION

GHS Classification : Sensitization - Category 1 (skin)  
Specific target organ toxicity (single exposure) - Category 2  
Specific target organ toxicity (repeated exposure)  
- Category 1,2

Labelling:

Symbol



Signal word

: **DANGER !**

Hazard statement

: May cause an allergic skin reaction.  
May cause damage to respiratory system.  
Causes damage to lung through prolonged or repeated exposure.  
May cause damage to eye/respiratory organs:inhalation  
through prolonged or repeated exposure.

Precautionary statements :

Do not breathe fume/mist.  
Wash hands thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the  
workplace.  
Wear protective gloves.

### 3. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENTS			ACGIH		Other Limits
Chemical Name & Common Names	CAS No.	%	TLV-TWA		Recommended
Solder alloy					
Tin	7440-31-5	85.4	2 mg/m <sup>3</sup>		
Silver	7440-22-4	2.7	0.1 mg/m <sup>3</sup>		
Copper	7440-50-8	0.4	0.2 mg/m <sup>3</sup>		
Vehicle	trade secret	11.5	N/A		
(flux ; modified resin, glycol ether, activaor, additive)					
TOTAL			100.0		

\*OPTIONAL N/A : Not applicable

### 4. FIRST AID MEASURES

- Ingestion : Wash out mouth with water.  
Call a POISON CENTER or doctor if you feel unwell.
- Skin : Wash with plenty of soap and water.  
Get medical advice/attention if skin irritation or rash occurs.  
Call a POISON CENTER or doctor if you feel unwell.  
Wash contaminated clothing before reuse.
- Inhalation : Call a POISON CENTER or doctor if exposed or if you feel unwell.
- Eyes : Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER or doctor.

#### 5. FIRE FIGHTING MEASURES

Suitable extinguishers : Carbon dioxide, dry chemical, alcohol resistant foam.  
Keep containers cool with spray. Do not use water jet on molten solder.

Hazardous Combustion Products : Same as the rosin core solder flux fume.

Special Equipment for Fire-Fighting : Self-contained breathing apparatus.

#### 6. ACCIDENTAL RELEASE MEASURES

Safety Precaution : Wear impervious gloves and eye protection.

Small spillage : Scrape up spilled waste to lidded container. Clean area with strong detergent or solvent. Remove to a safe place for disposal.

Large spillage : Avoid entry into drains, ditches, streams or rivers. Transfer to salvage tank if possible, otherwise treat as small spillage. Inform local authorities if contamination enters watercourses or drains.

#### 7. HANDLING AND STORAGE

Avoid contact with skin and eyes. Observe normal standards of industrial hygiene for handling chemicals. Do not smoke, drink or eat when handling this product.

Store in a cool, dry place, preferably refrigerated. (below 10°C)

#### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory : Type for organic vapors if required

Hand : Impervious gloves

Eye : Safety goggles, chemical, molten metal resistant

Skin : Overalls and boots

Hygiene measures : Always wash thoroughly after handling chemicals, especially before eating, drinking and smoking.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Gray paste  
 Odor : Terpene like  
 pH : N/I  
 Melting point : 216 – 220°C (as solder alloy)  
 Boiling point : > 259°C  
 Flash point : > 141°C  
 Vapor pressure : < 0.1K Pa (at 20°C )  
 Solubility in water : Insoluble  
 Relative density : Approx. 4.0 g/cm<sup>3</sup> (at 20°C)  
 Solubility in water : Insoluble  
 Viscosity : 200 Pa·s (at 25°C )

\*OPTIONAL N/I : No information

### 10. STABILITY AND REACTIVITY

Stability : Stable under normal conditions  
 Conditions to avoid : Fire, and conditions which allow the paste to dry out  
 Materials to avoid : Oxidizing agents  
 Hazardous decomposition products : Same as the rosin core solder flux fume products

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Product/ingredient name	CAS number	result	Species	Dose	Exposure
modified resin	proprietary	LD <sub>50</sub> Oral	Rat	>7.6 g/kg	-
		LD <sub>50</sub> Dermal	Rabbit	2.5 g/kg	-
		LD <sub>50</sub> Inhalation	Rat	2.3 mg/L	4 hours
silver	7440-22-4	LD50 Oral	Rat	>2.5 g/kg	-

#### Carcinogenicity

##### Classification

Product/ingredient name	CAS number	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
silver	7440-22-4	-	-	D	-	-	-

## 12. ECOLOGICAL INFORMATION

### Aquatic ecotoxicity

Product/ingredient name	CAS number	Test	Result	Species	Exposure
modified resin	proprietary	Intoxication	Acute EC <sub>50</sub> 4.5 mg/L	Daphnia magna	48 hours

## 13. DISPOSAL CONSIDERATIONS

Solder paste and empty containers with residues must be regarded as "Special Waste" for disposal.

Disposal should be via an authorized contractor to an approved site, observing all local and national regulations.

## 14. TRANSPORT INFORMATION

Information approved for the carriage of dangerous goods.

UN Number : Not regulated  
Proper shipping name : -  
Class : -  
Packing Group : -

## 15. REGULATORY INFORMATION

HS Code : 3810.10.000

## 16. OTHER INFORMATION

Legal disclaimer : The information contained in this data sheet does not constitute an assessment of workplace risks. The above information is based on the present state of our knowledge of the product at the time of publication. It is given in good faith, no warranty is implied with the respect to the quality or the specification of the product. The user must satisfy himself that the product is entirely suitable for his purpose.