### Safety Data Sheet

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### 1. Product and company information

Product Name: Electrodeposited Copper Foil

Synonyms: PK-HTE-LP3 \ PK-HTE-RTF \ BR-HTE-2RT \ BR-DSS-LLX \ BR-DSS-2LX

Recommended use and restrictions on the use:

Only use to make copper clad laminate, printed circuit board.

Manufacturer/importer or supplier:

LCY Technology Corporation

Company Address: 5F, 83, Pateh Rd., Sec. 4, Taipei, 105 Taiwan

Factory Address: 3-1, Chung Lin Rd., Hsiaokang Kaohsiung, 812 Taiwan.

General Information: TEL: 886-2-2763-1611, FAX: 886-2-2764-5749

Transportation Emergency Number:

TEL: 886-2-2763-1611/886-07-871-1291

#### 2. Hazard Identification Data

Items hazard classification: According to GHS classification, no physical hazard, health hazard, and environmental hazard.

Labeling information: According to GHS classification, no physical hazards, health hazards, and environmental hazards.

Other hazards: According to GHS classification, no physical hazards, health hazards, and environmental hazards.

### 3. Component identification data

Pure substance:

Name: Electrodeposited Copper Foil

Synonymous name: -

CAS No.: 7440-50-8

Hazard ingredients (ingredients percentage) : <0.5

#### Mixture

Component	CAS No.	Weight %
Copper	7440-50-8	>99.92%
Zinc	7440-66-6	< 0.06%
Nickel	7440-02-0	< 0.01%
Chromium	7440-47-3	< 0.01%

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#### 4. First-Aid Measures

Eye: Contact of the foil form of this product with the skin is not anticipated to be irritating. Rare cases of allergic contact dermatitis have been reported in people working with copper dust. Contact with the foil form of this product or metal dust generated during routing operations can be physically damaging and irritating to the eye (i.e., foreign object).

**Skin**: Skin absorption is not known to be a significant route of over-exposure for any component of this product.

**Inhalation**: Ingestion is not anticipated to be a likely route of occupational exposure for this product. If particulates generated during routing operations are ingested (i.e., through poor hygiene practices), nausea, vomiting, diarrhea, and abdominal cramps can occur.

**Ingestion**: Injection of this product is not anticipated to be a significant route of exposure.

The most important symptoms and reactions: With obstructive respiratory diseases, may be inhaled copper powder, leaving deterioration due to stimulation.

For emergency personnel of protection:	otection: -	l of p	personnel	emergency	For
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Physician's tips: —

### 5. Fire Fighting Measures

Suitable Extinguishing Media: Water Spray, Carbon Dioxide, Foam, Dry Chemical, Halon, Other: Any "ABC" Class

May encounter when the special fire hazards:

Copper smoke particles can cause irritation and upper respiratory tract, note should be upwind of fire (Note: copper itself is not flammable).

Fire Fight Procedures: —

The special protective equipment for fire-fighters: —

#### 6. Accidental Release Measures

Individuals should note: -

Environmental Considerations: —

Methods for cleaning up: —

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#### 7. Disposal and storage methods

### Disposal:

- 1. foil roll, with a certain weight according to different specifications, please select the appropriate tools and equipment when handling.
- 2. The operator should be trained and authorized qualified jobs.
- 3. Carefully selected employees, do not have the mental state of poor physical and mental tiredness.
- 4. Prohibition did not wear protective gloves, dust mask and safety glasses or goggles are close to copper, because copper avoid human breath, tears and other secretions Spit or pollution caused by oxidation. Storage:
- 1. at  $20 \sim 25$  °C, RH: <60%, can be stored for 90 days.
- 2. However, if the proposal does not match the conditions of storage sites, does not affect the safety of the concerns.
- 3. Storage building body copper foil should be durable, not uneven ground, put the reservoir should be really smooth firm, set up the pile or block retaining wall, if necessary, in order to avoid collapse, rolling or sliding (Note: It is highly recommended to store less than 1 m).

### 8. Exposure prophylaxis

### **Engineering Controls:**

- 1. Use local exhaust equipment.
- 2. Control Winds recommends 0.5 m / sec or more, the residual copper foil to avoid fugitive

#### Control parameters

When the amount	A short amount	Maximum	Biological
of eight hours	of time the	allowable	indicators
daily average	average	concentration	BEI
allowable	allowable	CEILING	
concentration	concentration		
TWA	STEL		
-	-	-	-

### Personal Protective Equipment (PPE):

Respiratory Protection: The above level of N95 respirators.

Hand protection: Protective gloves, Dyneema, Spectra, Kevlar and other fiber materials.

Eye protection: compliance with the provisions of the CNS safety glasses or goggles.

Skin and body protection:

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- 1. ultra-high molecular weight polyethylene fiber (Dyneema, Spectra) or more than aramid (Kevlar) fiber material and other protective clothing.
- 2. Comply with the provisions of CNS safety shoes.
- 3. Comply with the provisions of CNS helmet.

Hygiene measures:

- 1. Worker skin, body after exposure to copper, wash the affected area with soap and water.
- 2. Overalls, protective gear when contaminated, must clean changed daily.

### 9 · Physical and chemical properties

State of matter: solid	shape: Foil
Color: brass	Odor: Odorless
Odor threshold: -	Melting point: melting 1,083 ℃
pH: -	Boiling point / boiling range: 2582 °C, 1atm °C
	Flash Point: -
Flammability (solid, gas): -	Test method: (-) Open Cup (-) On
	Cup
Decomposition Temperature: -	
Self-ignition temperature: -	Explosion limits: -
Vapour pressure: -	Vapour density: -
Density / specific gravity: (water = 1.0) 8.9at 20 °C	Solubility: Do not dissolve in hot water and cold water; soluble in nitric acid, hot sulfuric acid; in hydrochloric acid and ammonium hydroxide solubility minimal.
Octanol / water partition coefficient (log Kow): -	evaporation rate: -

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10. Stability and Reactivity

Stability

Prolonged exposure to air foil color will darken, moist air will oxidize.

Under special conditions of Hazardous Reactions: -

The situation should be avoided: -

The substance should be avoided:

Ammonium nitrate, bromate, chlorate, iodate, chloride,

polyoxyethylene, biphenyl ammonium nitrate (hydrazine mononitrate), hydrogen and nitrogen acid (hydrazoic acid), potassium, sodium azide (sodium azide).

Hazardous Decomposition Products: -

11. Toxicological Information

Route of Exposure:

Inhalation: -

Skin: -

Eyes: -

Ingestion

Acute toxicity:

LD50 (test animals, absorption pathways): -

LC50 (test animals, absorption pathways): -

Symptoms: -

Chronic or long term toxicity: -

Symptoms: -

Chronic or long term toxicity: -

12. Ecological Information

Ecotoxicity: -

Persistence and degradability: -

Bioaccumulation: -

The soil Mobility: -

Other adverse effects: -

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#### 13. Disposal Considerations

#### Waste Disposal Method:

- 1. The foil can be completely disposed of recycling or reuse.
- 2. To scrap of copper (excluding board and components are), you can notify the company recycled.
- 3. Mix containing copper foil substrate or zero components, please hazardous industrial waste in accordance with recognized standards of Schedule 2 of the waste project classification number 10, E-0222 attached components of waste printed circuit board processing declaration.

### 14. Transport Information

1 Transport information
UN number: -
UN shipping name:
<del>-</del>
Transport Hazard
Classification: -
Packing group: -
Marine pollutant (Yes / No):
-
Special delivery methods
and precautions: -

#### 15. Regulatory Information

Applicable Regulations:

National Standard 15030.

National Standards 6864.

Hazardous materials and hazardous material labeling and Liberal rule.

Labeling of hazardous chemicals and Liberal rule

Toxic chemical labeling and safety data sheet management approach Road safety rules.

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### 16. Other Information

Defended in Officiation			
References:			
1. The globally harmonized system of classification & labeling of			
chemicals, GHS-ST / SG / AC.10 / 30 / Rev.1, 2005.			
2. LCY Technology Co., Ltd. R & D room.			
3. toxic chemicals Internet reporting system http://flora2.epa.gov.tw			
	Name: LCY Technology Co., Ltd.		
Tabulation	Address: 3-1, Chung Lin Rd., Hsiaokang Kaohsiung,		
Unit	812 Taiwan.		
	TEL: 886-07-871-1291		
Lister	Title: shift supervisor	name (signature): WY.Gong	
Tabulation	2024/05/22		
date			
Remark	<ol> <li>The LCY Technology Co., Ltd. copper Safety Data Sheet, referring to GHS-ST / SG / AC.10 / 30 / Rev.1, 2005 version of the production. Health hazard classification of copper metal (≥ 0.1%) is determined, there is no through integrity testing and evaluation, the Department of copper toxicological literature aggregated together.</li> <li>The Company has sought to perfect foil safety data sheet for complete; data sheet recommends the contents and data lines for reference only, please according to the actual situation of the user determine their own.</li> <li>The contents of the form inquiries, please contact your company or factory diameter (field) of the safety and health personnel, environmental technicians, emergency personnel, or related professional and technical personnel instructions.</li> <li>The contents of the form found in error, please feel free to notify the Company amended.</li> </ol>		