

**IDENTITY** (As used on the Label and List)Product Class: **COPPER ALLOY STRIP**Trade Name: **EFTEC-64T (C 1 8 0 4 5)****SECTION I**

## Manufacture's Name and Address

The Furukawa Electric Co., Ltd.

2-6-1 Marunouchi, Chiyoda-ku, Tokyo 100-8322, Japan

## Unit In charge

1-st Sales Dept. Metals Company

TEL:81-3-3286-3850

FAX:81-3-3286-3289

## Emergency Information

Quality Control Sec. Nikko Copper Works

TEL:81-288-54-2277

FAX:81-288-53-4405

## Prepared

Technical &amp; Engineering Department, Metals Company

29 Sept. 2004

**SECTION II - Hazardous Ingredient / Identify Information**

Class (Simple or Mixture): Combined Mixtures

Chemical Name: Copper - Chromium - Tin - Zinc Alloy

Component:

Component	% by wt.	CAS No.
Cu	99.28	7440-50-8
Cr	0.25	7440-47-3
Sn	0.25	7440-31-5
Zn	0.22	7440-66-6

Chemical formula: Cu - Cr - Sn - Zn

Hazardous Components: Nothing for ordinary service condition

"Copper" and "Tin" have toxicity of acute See Section VI.

**SECTION III - Physical / Chemical Characteristics**

Specific Gravity: 8.9

Boiling Point (deg. centi): Cu = 2630, Cr = 2200, Sn = 2275, Zn = 907

Melting Point (deg. Centi): 1080

Solubility in Water: Not Applied

Appearance: Glossy Red (solid)

Odor: None

**SECTION IV - First Aid Measures**

Occurrence of powder or dust after machining, grinding this materials.

- a) Enter the eyes : Wash out with clean running water over 15 minute. If feel pain, consult eye doctor immediately.
- b) Adhere to skins : Wash out with soap and water then rinse with many water.
- c) Inhalation : Remove victim to fresh air immediately, then lie quietly keeping warmth. Get immediate medical attention.

Directly handling after work

- a) Scalded skins : Cool affected part with running water immediately. If serious, get immediate medical attention.
- b) Swallowing tips : Rinse mouth with water, get immediate medical attention.

**SECTION V - Fire and Explosion Hazard Data**

Flash point ( Method Used)	: N / A
Flammable Limit	: N / A ( LEL/UEL; N / A)
Extinguishing Media	: N / A (Stable, nonflammable substance)
Special Fire Fighting Procedures	: Not specified
Unusual Fire and Explosion Hazards	: Metal products do not present fire or explosion hazards under normal conditions.

**SECTION VI - Reactivity Data**

Stability	: Stable under normal conditions of use, storage, and transportation.
Incompatibility ( Materials to avoid )	: Nothing
Hazardous Decomposition or Byproducts	: Nothing
Hazardous Polymerization	: Will not Occur

**SECTION VII - Health Hazard Data**

Nothing for the Combined mixtures. Refer as follows, for component Elements.

Skin Corrosion	: No Data
Irritant Property: (Skin, Eye)	: Copper cause Inflammation, rarely.
Sensitization	: No Data
Acute toxicity	: < Copper >
	Mouse LD <sub>50</sub> > 4000 mg/kg for Copper powder
	Swallowing may cause, Nausea, Vomiting, and a Feeling of Lassitude.
	Inhalation of powder, dust and fume may cause Cough, Breast, and fit for Fever.

## &lt; Zinc &amp; Chromium &gt;

Fume may cause Cough, Breasht, and fit for Fever after several hours from Inhalation of the fume.

## &lt; Tin &gt;

Very rare.

Semi-acute toxicity : No Data

Chronic toxicity : < Copper >

Symptoms of Chronic poison characterize impedi,ments of the Liver and the Kidney.

## &lt; Zinc &gt;

Very rare

## &lt; Tin &gt;

Long-term adsorption of it cause the symtom of the Tin composure, do not down activity of the Lungs.

Carcinogenicity : N / A

Mutagenicity : N / A

Teratogenicity : N / A

**SECTION VIII - Precautions for State handling , Use and Disposal**

Steps to be Taken in Case Material is Released or Spilled : N / A

Waste Disposal Method : Collect scrap for remelting.

Precautions to be taken in handling and storing : No special requirements

Other Precautions : No special requirements.

**SECTION IX - Ecological Information**

Biodegradability : No Data

Fish on Toxicity : TLm (Cu) 48 Hr as form  $\text{CuSO}_4$

Salmongairdneri : 0.038 ~ 0.8 ppm

Oryzias Latipes : 2.1 ~ 2.4ppm

BOD / COD : N / A

**SECTION X : Exposure controls personal protection**

Control Density : N / A

Allowance Density : Not applied for ordinary service also. In occurrence of the fume or the dust, refer to the under table.

Component	The Japan Institute of Industrial Hygienics Advised Value	ACGIH ( TLV )	OSHA ( PEL )
Copper " Cu "	N / A	Time weighted Average 0.2 ( Fume ) 1.0 ( Dust ) Short time exposure Limit 2.0 ( Dust )	0.1 ( Fume )
Chromium " Cr "	for Pure metal 0.5	for Pure metal & metallic Compound 0.5	N / A
Tin " Sn "	N / A	Time weighted Average 2.0 ( Inorganic compound ) 1.0 ( Organic compound ) Short time exposure Limit 4.0 ( Inorganic compound ) 0.2 ( Organic compound )	N / A
Zinc " Zn "	5.0 ( Fume )	5.0 ( Fume )  10.0 ( dust )	5.0 ( Fume ) 10.0 ( 15 min. Max. ) 10.0 ( dust ) 50 ( to breath )

Equipment : No special equipments ordinary.

In occurrence of the fume or the dust with densities over that table, you shall install local exhaust or Ventilation, must use mask at least.

Protectors : < For hands and fingers >

To avoid cut at edges, do not deal by bare hands, use gloves  
< For eyes >

In working, to avoid Injury use glasses.

Other protective Clothing or Equipment : None

## SECTION X I - Transport Information

In Japan : No regulated

Precautions : Keep dry with sheet covers, for example.  
Take care not to drop and pull down.

### Caution

Information herein is given in good faith as authoritative and valid ; however , no warranty, express or implied can be made.