

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.

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Unit In charge

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Emergency Information

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Prepared

Technical & Engineering Department, Metals Company

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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 ₅₀ > 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.

< Zinc & Chromium >

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

< Tin >

Very rare.

Semi-acute toxicity : No Data

Chronic toxicity : < Copper >

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

< Zinc >

Very rare

< Tin >

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 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.