

MATERIAL SAFETY DATA SHEET

1. Product and Company Information

Technical Service Section
DOWA-OLIN METAL CORPORATION
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Revision date : February 26, 2009
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Name of material : C194 (OLIN194)

2. Specification of substance

Chemical name : Cu-Fe-P-Zn alloy

Element	Fe	P	Zn	Cu
CAS No.	7439-92-1	7723-14-0	7440-66-6	7440-50-8
Chemical Composition (%)	2.35	0.07	0.12	Bal.

3. Hazardous/poisonous classification

Name of classification : Not applicable

Possible hazardousness / Possible toxicity :

This product is stably solid material and there is no classification as hazardous or toxic material. Acceptable density for environment is specified by elements concerning vapors and dusts which are generated from the processes of melting, welding, cutting and grinding.

Chronic inhalation of high concentration of Iron oxide fume or dust may cause siderosis.

Effect on environment :

There is a drainage standard for copper in life environment clause of prevention low on water quality contamination.

4. First aid

(1) Caught in the eyes:

Immediately flush out dust with sufficient clean water and get physician's treatment for pain or uncomfortable feel.

(2) Struck to the skin: Soap up the portion.

(3) Inhaled: If a large quantity of vapors and particles are inhaled, move the patient to a place of clean air immediately. Give the patient oxygen inhalation and have him/her receive immediate physician's treatments in case it seems to be necessary.

(4) Swallowed: If large quantities of vapors and particles are swallowed, make him/her vomit and then have him/her physician's treatments immediately.

5. Action for fire

Extinguishing: -- (Incombustibles)

6. Action for leakage

No requirement for solid metal product.

7. Notes for handling and storage

Handling: To prevent the inhalation of vapors or particles, wear personal protection such as a mask in welding or grinding processes.
The cut ends or edges of the strip are sharp enough for cut, so take sufficient care when handling.

Storage: Do not store together with acids.

8. Avoidance of exposure

Acceptable concentration :

Japan Society for Occupational Health: No Requirement

ACGIH TWA * Cu 1mg/m³ (dust)

Cu 0.2mg/m³ (fume or vapor)

Protective outfit

For mouth: Dustproof mask

For eyes: Dustproof glasses

For hands: Rubber or plastic gloves

For body: --

* ACGIH TWA: American Conference of Governmental Industrial Hygienists
Time Weighted Average

9. Physical / chemical properties

Appearance : Metallic brightness

Melting point : 1089°C

Specific gravity : 8.91

10. Hazardous information

Stability / reactivity: Stable under normal handling conditions.

11. Toxicological information

(No information about the alloy, but information on each element is shown below.)

Acute toxicity:

Orally administered - mouse LD50 >4000mg/kg (Copper dusts)

Carcinogenicity

Japan Society for Occupational Health: No Classification

12. Ecological Information

(No information about the alloy, but information on each element is shown below.)

Water Pollution Control Law:

Life environment clause (for Copper)

13. Note for scrapping

C194 should be collected and recycled as a metal.

Contact scrapping agent.

14. Note for transportation

Handle with care when transporting as follows:

Take care not to allow the air to cause corrosion, turnover, drop or packing disorder.

15. Applicable legislation

(No information about the alloy, but information on each element is shown below.)

Water Pollution Control Law:

Life environment clause (for Copper)

C194 does not correspond to Poisons, Deleterious Substances, Specific Deleterious Substances, in Poisonous and Deleterious Substances Control Law.

16. Other Information

We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse or accuracy. We have not verified this information, and can not guarantee that it is up-to-date.