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MATERIAL SAFETY DATA SHEET

FOR

DAISHIN BRONZE TS-TYPE

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MANUFACTURERS OF BRAZING EQUIPMENT
DAISHIN INDUSTRIAL CO., LTD.

MATERIAL SAFETY DATA SHEET

SELECTION 1. PRODUCT NAME : DAISHIN BRONZE TS-TYPE

SELECTION 2. INFORMATION ON INGREDIENTS

Classification of Single/
Mixture Product : Mixture

Chemical Name : Copper, Zinc, Tin and Silicon Alloy

Component and Content : Copper (60.0-61.5%), Zinc (36.5-38.6%),
Tin (1.3-1.8%) and Silicon (0.10-0.17%)

Chemical Formula : Cu-Zn-Sn-Si

CAS No. : Copper (7440-50-8), Zinc (7440-66-6),
Tin (7440-31-5) and Silicon (7440-21-3)

U.N. Classification and
U.N. No. : This product does not fall under U.N. dangerous goods.

SELECTION 3. PHYSICAL AND CHEMICAL PROPERTY

Form : Wire shape solid
Color : Glossy yellow
Odor : Odorless
Specific Gravity : 8.4
Solidus Curve : 885
Liquidus Curve : 900

SELECTION 4. HAZARDS IDENTIFICATION

Classification : No classification as mixture. However, copper and zinc
have acute poisonous and chronic poisonous.

Danger : Non

Hazard : When inhaling fume, metal fever or stimulation
inflammation of respiratory organs will occur.

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SELECTION 5. FIRST AID MEASURES

- Inhalation : When inhaled lots of dust such as chips, remove victim to fresh air immediately. Lie quietly and keep warm, and then receive a medical treatment.
- Skin Contact : When heated chips adhere to skin and a light burn occurs, immediately flush skin with lots of water to cool the affected part. When a heavy burn occurs, receive a medical treatment immediately.
- Eye Contact : When chips get into your eyes, immediately flush eyes with clean water. In case that pain is remained after that, immediately receive a medical treatment.
- Ingestion : Wash inside of mouth with water. If possible, induce vomiting and immediately receive a medical treatment.

SELECTION 6. FIRE FIGHTING MEASURES

- Extinguishing Media : Since this product is non-combustible, no extinguishing media is available.
- Extinguishing Method : This product is non-combustible.

SELECTION 7. ACCIDENTAL RELEASE MEASURE

Since this product is solid, not applied.

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SELECTION 8. HANDLING AND STORAGE

- Handling : As this product is heavy, be careful about dropping or falling down. Avoid handling roughly such as letting fall, giving a shock or dragging.
- As cut face is sharp and the product may change color when touching with salty empty hands, use gloves.
- Since the product has spring property, be careful not to have a cut by spring or an eye wound.
- Storage : Don't contact chemicals such as acid, alkali, strong oxidising agent, chloride, sulfide, etc.
- Storage area should be flat. Don't store the product in inclined area nor unstable area, since it cause to fall down.

SELECTION 9. EXPOSURE CONTROLS AND PROTECTION MEASURES

- Facility Measures : It is not necessary usually. However, in case that dust or fume occurs, it is desirable to prepare local ventilation when it is not possible to keep fume concentration lower than the following standards.

Maximum Permissible Exposure :

There is no regulation for mixture. However, when fume or dust occurs, refer to the following data.

Object Material	ACGIH	The Japan Industry Health Association
Copper Fume	0.2	Not specified
Zinc Oxide Fume	5.0	5.0

- Control Concentration : Not specified

- Protective Items : It is not necessary for the condition of wire. However, in casw that there are dust, small chips, lathe waste or powder, use dust mask and protective glasses. Wear proper protective clothing and safty shoes.

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SELECTION 10. STABILITY AND REACTIVITY

Stability : This product is inactive and stable.
Reactivity : This product is non-combustible, non-self reactive and non-explosive.

SELECTION 11. TOXICOLOGICAL INFORMATION

No toxic as alloy.

SELECTION 12. ECOLOGICAL INFORMATION

No data available.

SELECTION 13. DISPOSAL CONSIDERATION

Since this product can be recycled, consign the product to recovery agent.

SELECTION 14. TRANSPORTATION INFORMATION

Protect against rain by covering the product with a sheet of tarpaulin. Protect against dropping or falling down. Handle with care.

SELECTION 15. REGULATOR INFORMATION

Usually no regulation.
In case that dust occurs : Article 2, Clause 1 Dust obstacle protection regulation of Occupational Safety & Health law.

SELECTION 16. OTHER INFORMATION

Patina colored corrosive component (mainly basic copper carbonate) may occur on the surface of the product caused by repeated dry and moisture. In this case, avoid contacting the foods.

Please use this Material Safety Data Sheet as reference information in order to handle the product safely about dangerous chemical goods with understanding that it is necessary to handle and take proper treatment for each actual condition under your own responsibility. Therefore, please understand that this Material Safety Data Sheet is not a written safety guarantee.