

## MATERIAL SAFETY DATA SHEET

Technical Section  
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**Common name:** 42%Ni-Fe Strip

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### Specification of substance

Chemical name: Ni-Fe-Alloy

Chemical Composition : Ni:41%, Mn:0.5%, Si:0.2%, C:0.02%, Fe: bal

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### Classification for hazard/toxicity

Classification name: Not applicable

Hazard/Toxicity information:

This material is stably solid material and is not regulated as hazard or toxicity material under normal conditions of use. However, as for the fume and dust particles, which are generated by the process of melting, welding, cutting and grinding, permissible environmental concentration is defined in the each element.

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

Exposure of high concentration of Ni-fume or dust particles may cause pneumonia.

Environmental effect: None

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### First aid procedures

**Eyes:** Immediately flush out dust particles with sufficient clean water.  
If eye irritation develops, obtain medical help at once.

**Skin:** Skin contamination with dust particles can be removed by washing with soap and water.

**Inhalation:** Breathing difficulty caused by inhalation of vapor or dust particles requires immediate removal to fresh air. If needed, perform artificial respiration and obtain medical help at once.

**Ingestion:** If swallowing large amounts of dust particles, attempt to induce vomiting and obtain medical help at once.

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**Measures in case of fire**

Not considered to be a fire hazard.  
Flammable as dust or fume.

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**Measures in case of Leakage**

No regulations under solid metal product.

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**Precautions for safe handling and storage**

Handling: In order to prevent the inhalation of vapor or particle on the process of welding or grinding, need to wear a personal protective outfit (mask etc).  
Take sufficient care when handling the metal sheet, strip, wire and bar, because these metal cut ends or edge of the strip may cause laceration.

Storage: Not allowed to store 42Ni-Fe together with acids.

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**Prevention measures of exposure**

Acceptable concentration: Japan Society for Occupational Health

	—	Ni: 1 mg/m <sup>3</sup>
	—	Mn:0.3mg/m <sup>3</sup>
OSHA PEL	—	Fe:10mg/m <sup>3</sup> (Iron oxide vapors)

**Protective outfit**

Breathing: Dustproof mask required  
Eyes : Dustproof glasses required  
Hands: Rubber or Vinyl glove required  
Body: —

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**Physical/chemical properties**

Appearance:	Metallic brightness, Solid metal
Melting point:	1425°C
Specific gravity:	8.15

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**Hazardous information**

Stability, Reactivity: Stable under normal conditions of use

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### **Health Hazard Information**

Acute toxicity: Orally administered- mouse LD<sub>50</sub> > 9000mg/kg (Ni, Mn)

Classification for carcinogenic substance: inhalation

Nickel metal is listed by IARC as group 2B carcinogen.

(Nickel metal may be considered to be possibility carcinogenic to human by IARC):

According to epidemiological investigation, inhalation of nickel metal has been shown not to be possibility carcinogenic to human body.

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### **Cautions for scrapping**

Ask specific scrapping agent

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### **Cautions for transportation**

Handle with care when transporting as follows:

: Corrosion by the atmosphere, Fall, Collapse of cargo piles etc

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