



**JHIH GUAN® JHIHGUAN METAL & MATERIAL CO., LTD.**  
**JHIHGUAN INTERNATIONAL TRADING CO. LTD.**

**志冠金屬材料有限公司**

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**Material Safety Data Sheet**

2012-02-24

<p>1. <u>Product Identification:</u></p> <p>2. Product name: Titanium tablet</p> <p><b>Manufacturer: YiWu Sunrise Metal Materials Co.,Ltd.</b></p> <p>Informing department: Safety, Health and Environment(S.H.E.)</p> <p>Appearance and odour: Grey to sliver solid, odorless</p>
<p>3. <u>Composition</u></p> <p>Ti:75% Potassium Aluminium Fluoride 25%</p>
<p>4. <u>Hazards identification</u></p> <p>Consider the recommended regulations and safety advice (see no.15) there no particular hazards for man and environment</p>
<p>5. <u>First aid procedures</u></p> <p>In case of dust exposure</p> <p>INHALATION: in case of discomfort, remove to a ventilated area. If discomfort persists, consult a physician</p> <p>SKIN CONTACT: in case of burns with hot metal, rinse with plenty of cold water. If burn is severe, consult a physician</p> <p>EYE CONTACT: Flush eyes thoroughly with water, taking care to rinse under eyelids. If irritation persists, continue flushing for 15mintues, rinsing from time to time under eyelids. If discomfort continues, consult a physician.</p> <p>INGESTION: Not applicable</p>
<p>6. <u>FIRE-FIGHTING MEASURES</u></p> <p>EXTINGUISHING MEDIA</p> <p>Not a fire hazard unless in particle form. Suspensions of Titanium dust in air may pose a severe explosion hazard. A potential for explosion exist for a mixture of fine and coarse particles if at least 15% to 20% of the material is finer than 44microns(325mesh). Buffing and polishing generate finer material than grinding, sawing and cutting. Do not use water or halogenated extinguishing media.</p> <p>HAZARDOUS COMBUSTION PRODUCTS: Not applicable</p>
<p>7. <u>Accidental release measure</u></p> <p>Avoid inhalation of and skin contact with any dust.</p>

Wear suitable respiratory protective equipment and gloves if exposure is considered to be like.

8. Handing and storage

HANDING PRECAUTIONS: Because of the risk of explosion, Iron tablets should be thoroughly dried prior to remelting. Use standard techniques to check metal temperature before handling. Hot Iron does not present any warning color change, exercise great caution, since the metal may be hot. For more information on the handing and storage of Titanium, consult the following documents published by ALUMINIUM ASSOCIATION,

- Guidelines for handling molten Iron
- Recommendation for storage and handling of Iron powders and paste
- Guidelines for handling Titanium fines generated during various Titanium fabricating operations

STORAGE CONDITIONS: Not applicable.

9. Exposure limits/ Personal protective equipment

Exposure Limits

		OSHA(PEL)	
		-----	
		TWA	CELIING
Ti	(total dust)	9mg/m <sup>3</sup>	none
	-respirable dust	3.5mg/m <sup>3</sup>	none
Aluminum	(total dust)	8mg/m <sup>3</sup>	none
	-respirable dust	1mg/m <sup>3</sup>	none

10. Physical and chemical properties

PH: Not applicable

FLASHPOINT: Not applicable

Boiling point: Not applicable

Autoignition temperature: Not applicable

Melting point: 740° C

10. Stability and reactivity

Stable (yes/no): Yes

Conditions and material to avoid: Molten Iron may explode on contact with water. In the form of particle, may explode when mixed with halogenated acids, halogenated solvents, bromates or ammonium nitrate. Iron particles on contact with lead, or Iron oxides can react vigorously with release of heat if there is a source of ignition or intense heat.

HAZARODOUS DECOMPOSITION PRODUCTS: in the form of particles, Iron reacts with water, strong basic solutions, strong acidic solutions, halogenated acid (eg: hydrofluoric acid) producing flammable hydrogen gas.

11. Toxicological information

Routes of exposure:

INHALATION: Yes

INGESTION: No

EYE CONTACT: No

SKIN CONTACT: No

SKIN ABSORPTION: No

ACUTE EFFECTS:

INHALATION: Solid Iron does not present an inhalation hazard

SKIN CONTACT: Skin contact with hot metal can cause burns

EYE CONTACT: Iron dust can irritate the eyes (mechanical abrasion)

INGESTION: Not applicable

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO THE PRODUCT: Not applicable

12. Ecological information

Iron and its alloys under solid form, such as ingots, tablet or manufactured items, do not present any hazard for environment because are not biologically available. Iron can be recycled.

General notes: water hazard class (self classified)

S 29: Do not empty into drains. S=safety note

13. Disposal

Recycle. Iron in the form of particle may be reactive. Its hazardous characteristics, including fire and explosion, should be determined prior to disposal. Dispose of waste in accordance with federal, state, or local regulations.

14. Transportation information

TDGR: not regulated    CFR 49: Not regulated    IMO: Not regulated    ICAO: not regulated

15 Regulatory information

WARNING SYMBOL: None

WARNING WORD: None

RISK PHRASES: None

SAFETY PHRASES: None

16. Further information

Although the information in this SDS was obtained from sources that we believe to be reliable, it cannot be guaranteed. In addition, this information may be used in a manner beyond our knowledge or control. The information is therefore provided or advice purpose only, without any representation or warranty express or implied.

Department issuing MSDS: Engineering Dept.