



JHIH GUAN INTERNATIONAL TRADING CO., LTD.

志冠國際貿易有限公司

1F, #71, CHUANGXIN RD., NANZI DIST., KAOHSIUNG CITY 811,

TAIWAN, R.O.C.

E-mail: jhihguan.metal@yahoo.com

Material Safety Data Sheet

AlTi5B1 master alloy

1. PRODUCT IDENTIFICATION

Chemical Formula : master alloy

Product Use : for grain refining of aluminium alloy.

Manufacturer/Supplier: JHIHGUAN INTERNATIONAL TRADING CO., LTD.

Address: 1F, #71, CHUANGXIN RD., NANZIH DIST., KAOHSIUNG CITY 811, TAIWAN
Tel: 886-7-3534037

2. COMPOSITION OF INGREDIENTS

<u>Component</u>	<u>CAS No</u>
Aluminum remainder	7429-90-5
Titanium 4.5-5.5%	7440-32-6
Boron 0.9-1.1%	7440-42-8

3. Hazards Identification

Potential Health Effects: The health effects listed below are not likely to occur unless processing of this product generates dust or fumes

Eyes: Dust or fume from processing can cause irritation

Skin: Contact with residual oil/oil coating can cause irritation. Prolonged or repeated contact with the skin can cause dermatitis.

Inhalation: Health effects from mechanical processing can cause irritation of the respiratory tract.

4. First Aid Measures

Eyes: Dust or powder should be flushed from the eyes with a copious amount of clean water for at least 15 minutes. If irritation persists, obtain medical assistance. Contact lenses should not be worn if working with metal dusts and powders.

Skin: Skin cuts and abrasions can be treated by standard first aid (i.e., cleansing, disinfecting

and covering the wound). Skin contamination with dust or powder can be removed by thoroughly washing with soap and water for at least 15 minutes. If irritation persists, obtain medical assistance. Material accidentally implanted or injected under the skin must be removed.

Inhalation Breathing difficulty caused by inhalation of dust or fume requires removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical assistance at once.

Ingestion

Swallowing metal powder or dust can be treated by having the affected person swallow large quantities of water and attempting to induce vomiting if conscious. Obtain medical assistance at once. Never give anything by mouth to an unconscious individual.

5. Fire explosion and reactivity information

Flash Point

Not applicable to solids.

Flammable (Explosive) Limits

Not applicable to solids. If in powder form, tests have found the powder to be weakly explosive according to ASTM "Standard Test Method for Pressure for Combustible Dusts."

Extinguishing media:

This alloy is noncombustible. Use extinguishing media appropriate to the surrounding fire.

Special fire fighting procedures:

If this material is reduced to powder form, caution must be used to prevent fire or explosion. To extinguish a metal powder fire use dry sand, dry graphite or other class "D" fire extinguishing powder.

Unusual Fire and Explosion Hazards

Molten aluminum and water can be an explosive combination. If the possibility of moisture contamination or entrapment exists, ensure solids or ingots are thoroughly dry prior to being placed in the furnace.

6. Accidental Release Measures

In solid form, this material poses no special clean-up problems. If this material is in powder or dust form, clean up should be conducted with a vacuum system utilizing a high efficiency particulate air filtration system. Caution should be taken to minimize airborne generation of powder or dust and avoid contamination of air and water. If in a molten form, contain the flow using dry sand or salt flux as a dam. Do not use shovels or hand tools to halt the flow of molten metal. Allow the spill to cool before remelting as scrap. Properly label all materials collected in waste container

7. Handling and Storage

Handling Precautions

This product must be handled according to the size, shape and quantity of the material involved. Solid metal may require use of hoists, cranes, etc. Powders should be moved or transported to minimize spill or release potential. Wear gloves when handling parts with loose surface particulate or sharp edges.

Storage Precautions

In solid form, this material poses no special storage requirements. Store metal and metal powder in a dry area. Cover and reseal partially empty container. Do not store adjacent to mineral acids. Fine metal powder should be kept away from flames and sources of ignition.

8. Exposure Controls/Personal Protection

Engineering Controls:

Use with adequate explosion-proof ventilation.

Respiratory Protection:

Use NIOSH-approved respiratory protection as specified by an industrial Hygienist or other qualified professional if concentrations exceed the limits

Eye Protection:

Wear safety glasses/goggles to avoid eye contact.

Skin Protection:

Wear impervious gloves to avoid repeated or prolonged skin contact with residual oils and to avoid any skin injury

9. Physical & Chemical Properties

Appearance: Silvery **Density(H₂O=1):**2.81-2.88

Solubility in Water: Not Applicable **Melting Point:**660-1250°C

Boiling point: Not Applicable **Odor:** None

10. Chemical Stability & Reactivity Information

General Reactivity

This alloy is a stable material under normal conditions of use, storage, and transportation.

Incompatibility

Avoid contact with mineral acids and oxidizing agents which may generate hydrogen gas; the evolution of hydrogen maybe an explosion hazard. Chlorinated hydrocarbons and powdered aluminum may cause an explosive reaction.

Hazardous Decomposition Products

Various elemental metals and metal oxides may be generated from melting or dross handling operations. Refer to Section II for PELs.

11. Toxicological Information

Not Available

12. Ecological Information

This material can be recycled. Please contact Freedom Alloys, Inc. for specific recycling information Not Available

13. ENVIRONMENTAL PROTECTION / DISPOSAL INFORMATION

Waste Disposal Method

Prior to disposal, consider if the material has recovery value.

Environmental Hazards

In solid form, this material poses no special environmental problems. Metal powders or dusts may have significant impact on air and water quality. Airborne emissions, spills and releases to the environment (discharge to streams, sewer systems, ground water, surface soil, etc.) should be controlled immediately. If potential for a spill or release exists, it is advisable to develop an emergency spill response plan.

14. Transportation Information

There are no Department of Transportation hazardous material regulations which apply to the packaging and labeling of this product as shipped by Freedom Alloys.

15. Regulatory Information

Must be Suitable for Federal Regulations

16. Other Information

This Material Safety Data Sheet is given by Quality Dept.