



## Material Safety Data Sheet (MSDS) Report

MSDS Number: 01200805

Data Reviewed : June 17, 2020

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : Aluminum Titanium Boron Alloy AlTi5B1

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use : Industrial application(e.g. casting)

#### 1.3 Details of the supplier of the safety data sheet

SUMETECH INDUSTRY AND TECHNOLOGY CO.,LTD  
NO.9,YANGSHAN ROAD,GULOU,XUZHOU,JIANGSU,CHINA

#### 1.4 Emergency telephone number

Tel: +86-13805171819, or contact your local emergency telephone number

Product Information

Tel: +86-13805171819

E-mail: info@sumetech.com

### SECTION 2: Hazards identification

#### GHS Classification(REGULATION (EC) No 1272/2008)

This solid metallic product do not constitute hazardous materials in its solid form with no intentionally released, it is therefore meet the definition of article set out in EU regulation (EC) No 1907/2006, so this product is exempted from the SDS obligation over the supply chain, the information contained in this SDS is supplied at the customer' s request for information only. However, downstream use of this article could result in some hazardous elements contained in these products to be emitted under certain processing conditions such as but not limited to: burning, melting, cutting, sawing, brazing, grinding, machining, milling and welding.

This product is article and is not considered as hzardous under regulation (EC) No 1272/2008, the material resultting from machining this product may be considered hazardous under regulation (EC) No 1272/2008.

#### GHS Labelling (REGULATION (EC) No 1272/2008)

This product contains no substances which at their given concentration, are considered to be hazardous to health, so no label elements should be shown on this section.

Signal word : Not applicable

Hazard statements : Not applicable

Precautionary statements : Not applicable

### 2.3 Other hazards

#### Additional advice

Solid metal do not present inhalation, ingestion or other chemical hazards.

However, operations such as grinding, cutting, burning and welding of such products may release particulate in the form of dusts and fumes, which may present health hazards.

Metal dust particles may cause eye, skin and/or respiratory system irritation.

## SECTION 3: Composition/information on ingredients

### 3.1 Mixture/

Manufactured article(solid)

Hazardous components

This product does not contain or release any hazardous substance under normal use conditions, the following information is provided for material that might be produced during further machining process.

Chemical name	CAS-No.	Concentration
TITANIUM	7440-32-6	>=1 - <10 %
BORON	7440-42-8	>=1 - <10 %
IRON	7439-89-6	>=0 - <1 %
STRONTIUM	7440-24-6	>=0 - <1 %
ALUMINUM	7429-90-5	BALANCE

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

No special measures required. In its solid form this product does not present an inhalation, absorption or ingestion hazard.

Grinding, polishing, abrasive blasting, hot rolling, thermal cutting or welding may produce dust or fumes containing complex or mixed oxides of its components.

Metal dust particles may cause eye, skin and/or respiratory system irritation.

The below information is for these instances.

Move out of dangerous area.

Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.

Show this safety data sheet to the doctor in attendance.

Do not leave the victim unattended.

**If inhaled**

First aid is not normally required.

Move to fresh air.

If breathed in, move person into fresh air.

If unconscious place in recovery position and seek medical advice.

Consult a physician after significant exposure.

**In case of skin contact**

First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

Wash contaminated clothing before re-use.

**In case of eye contact**

First aid is not normally required.

Flush eyes with water as a precaution.

Remove contact lenses.

Protect unharmed eye.

If eye irritation persists, consult a specialist.

**4.2 Most important symptoms and effects, both acute and delayed**

Symptoms : None symptoms expected or anticipated.

**4.3 Indication of any immediate medical attention and special treatment needed**

Treatment : No hazards which require special first aid measures.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

This product is not flammable in the form it is sold.

May be flammable if there are finely divided pieces resulting from processing of this product.

Extinguishing methods depend upon hazards in vicinity. Use dry extinguishing powders, sand, CO or other inert material as extinguishing media. Do not use water if any water-reactive metal powders are nearby.

**Unsuitable extinguishing media**

Do not use water.

**5.2 Special hazards arising from the substance or mixture****Specific hazards during firefighting**

No unusual fire or explosion hazards from solid alloys in massive form.

Dust, chips, thin strips, etc. created by grinding or processing can ignite if a substantial number of small particles are dispersed or adequate ignition source is present.

**Hazardous combustion products**

None known.

**5.3 Advice for firefighters****Special protective equipment for firefighters**

In the event of fire, wear self-contained breathing apparatus.

Self-contained approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present.

Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection.

**Specific extinguishing methods**

Product is compatible with standard fire-fighting agents.

Direct water stream will scatter and spread flames and, therefore, should not be used.

**Further information**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures****Personal precautions**

Use personal protective equipment.

Ensure adequate ventilation.

Avoid dust formation.

Avoid breathing dust.

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Comply with all applicable national and local regulations.

### **6.2 Environmental precautions**

Environmental precautions

Prevent product from entering drains.

If the product contaminates rivers and lakes or drains inform respective authorities.

### **6.3 Methods and material for containment and cleaning up**

Methods for cleaning up

Normal clean-up procedure for material in solid form.

Use clean-up methods which avoid dust generation, such as vacuuming, and fill into appropriate sealable containers.

Recycle or dispose of wastes according to regulations.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

The following are applicable for product being processed.

Avoid dust formation. Do not breathe fumes/dust.

Provide sufficient air exchange and/or exhaust in work rooms.

For personal protection see section 8.

Dispose of rinse water in accordance with local and national regulations.

#### **Advice on protection against fire and explosion**

Avoid dust formation. Take measures to prevent the build up of electrostatic charge. Provide appropriate exhaust ventilation at places where dust is formed.

#### **Hygiene measures**

Avoid breathing dust. Wash hands before breaks and at the end of workday. When using do not eat or drink. When using do not smoke.

### **7.2 Conditions for safe storage, including any incompatibilities**

#### **Requirements for storage areas and containers**

In solid form this material poses no special problems.

Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

**Other data**

No decomposition if stored and applied as directed.

**7.3 Specific end use(s)**

**Specific use(s)**

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Aluminium powder (stabilised)	7429-90-5	TWA (Inhalable dust.)	10 mg/m <sup>3</sup> Inhalable dust.	EH40 WEL
		TWA (Respirable dust.)	4 mg/m <sup>3</sup> Respirable dust.	EH40 WEL

**8.2 Exposure controls**

**Engineering measures**

Local exhaust ventilation should be used to control exposure to airborne dust and fume emissions near the source (during crushing, grinding, welding, etc.).

Provide appropriate exhaust ventilation at places where dust is formed.

**Personal protective equipment**

Eye protection: Wear safety glasses when risk of eye injury is present particularly during machining, grinding, welding, powder handling, etc. Contact lenses should not be worn if working with metal dusts and powders.

Hand protection : Wear impervious gloves as necessary to prevent metal cuts, skin abrasions and skin contact.

Protective clothing such as arm, foot, body protection etc., may be required during handling operations as appropriate for the exposure.

Respiratory protection : None required as shipped.

In the case of dust formation use respirator with an approved filter.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

Appearance: solid

Color : Silver grey

Odor : Odorless

PH: No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 720° C

Flash poin : Not applicable

Evaporation rate : No data available

Flammability : Non-flammable

Upper explosion limit : Product does not present an explosion hazard.

Lower explosion limit : Product does not present an explosion hazard.

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : Appr. 2.72 g/cm<sup>3</sup>

Water solubility : Insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition : No data available

Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Oxidizing properties : Not a oxidizer

**9.2 Other information**

No data available

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Hazardous reactions should not occur under normal conditions.

**10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

Hazardous reactions : Product will not undergo hazardous polymerization.

### **10.4 Conditions to avoid**

Conditions to avoid : Keep away from heat, flame, sparks and other ignition sources. Avoid formation and accumulation of dust.

### **10.5 Incompatible materials**

Materials to avoid : Acids/halogenated hydrocarbons

Strong oxidizing agents

### **10.6 Hazardous decomposition products**

Hazardous decomposition products : No hazardous decomposition products are known.

## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

In solid form, there is not a likely route of exposure, the following is provided based on the powder or dust it might be produced during processing.

#### **Acute toxicity**

Not classified based on available information.

#### **Skin corrosion/irritation**

Not classified based on available information.

#### **Serious eye damage/eye irritation**

Not classified based on available information.

#### **Product:**

Remarks: Product dust may be irritating to eyes, skin and respiratory system.

#### **Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Carcinogenicity**

Suspected of causing cancer.



**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

Not classified based on available information.

**Further information****Product:**

Remarks: No data available

**SECTION 12: Ecological information****12.1 Toxicity**

In solid form this product pose no special environmental problems.

Metal powders or dusts may have significant impact on air, land and water quality.

Airborne emissions, spills, and releases to the environment (discharge to streams, sewer systems, surface soil, etc.) should be controlled immediately.

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

Product:

Bioaccumulation : Remarks: The bioaccumulation potential cannot be determined.

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

Not relevant

**12.6 Other adverse effects**

Product:

Additional ecological information : No data available

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

General advice : Whenever possible, recover alloys for reuse or recycling.

Do not contaminate ponds, waterways or ditches with chemical or used container.

If material has been processed, analyze and dispose of waste material in accordance with local, state, or federal regulations.

**SECTION 14: Transport information****International transport regulations****14.1 UN number**

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

**14.2 Proper shipping name**

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

**14.3 Transport hazard class**

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

**14.4 Packing group**

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

**14.5 Environmental hazards**

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good



#### **14.6 Special precautions for user**

**Remarks** : Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

#### **SECTION 15: Regulatory information**

##### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation Annex XIV) : Not applicable

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

##### **15.2 Chemical safety assessment**

No data available

#### **SECTION 16: Other information**

##### **Further information**

Revision Date: June.17.2020

##### **Disclaimer**

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

ADR : Agreement concerning the International Carriage of Dangerous Goods by Road.

ADNR: Regulation for the Carriage of Dangerous Substances on the Rhine

CLP : Classification, Labelling and Packaging

CSA : Chemical Safety Assessment

CSR : Chemical Safety Report

DNEL : Derived No Effect Level.



EINECS : European Inventory of Existing Commercial Chemical Substances.

ELINCS : European List of Notified Chemical Substances

PEC : Predicted Effect Concentration

PEL : Permissible Exposure Limits

PNEC : Predicted No Effect Concentration

REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals

RID : Regulation Concerning the International Transport of Dangerous Goods by Rail

\*\*\*End of report\*\*