

# Material Safety Data Sheet

## Bismuth(III) Sulfide( $\text{Bi}_2\text{S}_3$ )

Date of issue: May 20, 2012

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### 1. Substance / Preparation and Company Identification:-

Product name:  $\text{Bi}_2\text{S}_3$  (Bismuth Sulfide)

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### 2. Composition / Information on Ingredients:-

Chemical nature (substance): REFRACTORY METAL SULFIDE

CAS-Reg. No.: 1345-07-9

MDL No: MFCD00014204

EINECS No215-716-0

RTECS No: EB3105000

Pubchem No: 24860111

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### 3. Possible Hazards:-

Hazard description: Not applicable.

Information concerning particular hazards for human and environment:

No hazards to be particularly mentioned. Please note the information of this Material Safety Data Sheet.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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### 4. First Aid Measures:-

Inhalation - if symptoms of pulmonary involvement develop, remove from exposure and seek medical attention.

Skin contact - if irritation occurs, thoroughly wash affected area with mild soap and water and prevent further contact, contact medical help if irritation persists.

Eye contact - if irritation occurs, flush with copious amounts of Water, contact medical help if

irritation persists.

Ingestion - if substantial quantities are swallowed, give person (if conscious) a large quantity of water to drink, induce vomiting, and seek medical attention.

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### **5. Fire Fighting Measures:-**

Flash Point: N/A

Flammability Limits: N/A

In case of fire, sulphur dioxide(SO<sub>2</sub>) is formed.

No Fire Hazard, Use extinguishing agents suitable for surrounding fire.

Special Procedures: Use a self-contained breathing apparatus to prevent inhalation of Dust, Mist

or fumes that may be generated during fire fighting activities. No Unusual fire or explosion hazards.

Suitable extinguishing media: Dry Sand, Special Metal extinguishing powder.

Unsuitable extinguishing media: Water

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### **6. Accidental Release Measures:-**

If Spilled or Released: Ventilate area of spill, clean up using methods which avoid dust generation,

such as Vacuuming with appropriate filter, wet dust mop, or wet clean up.

Precautionary measures regarding persons: Remove source of ignition. Avoid formation and

deposition of dust. Ensure effective ventilation.

Use the PPE (Personal Protective Equipment) as per chapter 8

(European Union: Note German Technical Regulation on Dangerous Substances No. 200/201)

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### **7. Handling and Storage:**

Handling:

Maintain good housekeeping procedures to prevent accumulation of dust. Use clean-up methods

which minimize dust generation.

Storage: Keep in sealed containers in a dry place.

(European Union: Observe the rules contained in the VCI concept for separate/common storage.

Observe official regulations. Storage class as per VCI: 11)

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### **8. Exposure Controls and Personal Protection:-**

Respiratory Protection: Use an appropriate NIOSH approved respirator. If airborne dust levels

exceed the TLV, appropriate requirements set forth in 29 CFR 1910.134 should be met.

Wash thoroughly after handling and before eating, smoking and end of work shift. Do not shake

clothing to remove dust. Avoid inhalation, ingestion and direct skin contact

Ventilation: Use local exhaust which is adequate to limit exposure levels below TLV.

Gloves: Recommended

Eye Protection: Recommended

(European Union: Respiratory equipment with filter type P according to DIN EN 143)

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### **9. Physical and Chemical Properties:-**

Appearance & Odour: Black or brown powder, odourlessness

Boiling Point: N/A

Melting Point: 685°C

Vapor Pressure (mm HG): N/A

Vapor Density (air=1): N/A

Solubility in Water: INSOLUBLE

Self-igniting: Product is not selfigniting.

Specific Gravity: (H<sub>2</sub>O=1) 7.7

Percent Volatile by Volume: 0

Evaporation Rate: N/A

How Best Monitored: AIR SAMPLE

Non-Hazardous Ingredients

Material: BISMUTH SULFIDE

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### **10. Stability and Reactivity:**

Reactivity Data

Stability: Stable

Conditions to avoid:Oxide,Acid

Incompatible Materials to Avoid: Contact with strong acids may generate Hydrogen Sulfide

Hazardous Decomposition Products: Oxides of Sulfur may be evolved at extreme temperatures.

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### **11. Toxicological Information:-**

Toxicological tests:

Acute toxicity:

LD50 Oral, rat: > 10mg/Kg

LC50 inhalation, rat > 5 mg/l, 4 h of exposure

Irritating/Corrosive effects:

Irritation of eyes/rabbit: slightly irritant

Irritation of the skin/rabbit: slightly irritant

Mutagenic effect: Salmonella typhimurium: No Indication of mutagenic effects.

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### **12. Ecological Information:-**

No hazardous for water

Do not allow product to reach ground water, water course or sewage system.

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**13. Disposal Consideration:-**

Disposal: Dispose off in accordance with appropriate Federal, State and Local regulations.

Unused material: reuse if possible.

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**14. Transport Information:-**

Non Hazardous cargo. Keep separated from foodstuffs

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**15. Regulatory Information:-**

No Special regulations. No regulated (Observe national regulations)

(European Union: No Labelling is required in accordance with the EEC directives.

TRGS 900 Atmospheric Threshold Value: Insoluble Tungsten Compounds: 5 mg/m<sup>3</sup>

Handling restrictions: none

Major accident regulations: not listed in the appendices

Technical Instruction for Air Pollution Control: Figure 5.2.1 Total dust

Water Pollution class (WGK): not harmful to water

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**16. Other Information:-**

Important:

Although Changsha Huajing Powdery Material Technology Co., Ltd has attempted to provide current and accurate information therein,

Changsha Huajing Powdery Material Technology Co., Ltd makes no representations regarding the accuracy or completeness of information and assumes no liability for any loss, damage, or injury of any kind which may result from, or arise out of, the use of or reliance on the information by any person.

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