1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1. Product Identifier

Product Name: Bronze Powder
Article No.: 54881

1.2. Relevant identified Uses of the Substance or Mixture and Uses advised against

Identified uses:
- Industrial application.
- Metal alloys, powder metallurgy

Uses advised against:

1.3. Details of the Supplier of the Safety Data Sheet (Producer/Importer)

Company: Kremer Pigmente GmbH & Co. KG
Address: Hauptstr. 41-47, 88317 Aichstetten, Germany
Tel./Fax.: Tel +49 7565 914480, Fax +49 7565 1606
Internet: www.kremer-pigmente.de
EMail: info@kremer-pigmente.de
Importer: --

1.4. Emergency No.

Emergency No.: +49 7565 914480 (Mon-Fri 8:00 - 17:00)

2. Hazards Identification

2.1. Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Chronic aquatic toxicity, hazard category 1
Cat.: 1

Classification according to Directive No. 67/548/EC or No. 1999/45/EC

Safety Phrases:
Possible Environmental Effects:

2.2. Label Elements

Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)

Hazard designation:

GHS09-1

Signal word: Warning

Hazard designation:
Very toxic to aquatic life with long lasting effects.
54881 Bronze Powder

Hazardous components for labelling:

2.3. Other Hazards

3. Composition/Information on Ingredients

3.1. Substance

3.2. Mixture

Chemical Characterization:

Information on Components / Hazardous Ingredients:

- Copper (H400-412); REACH Reg.No.: 01-2119480154-42-0076: > 49 % CAS-Nr: 7440-50-8 EINECS-Nr: 231-159-6 EC-Nr:

- Tin: < 51 % CAS-Nr: 7440-31-5 EINECS-Nr: 231-141-8 EC-Nr:

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information:

Seek medical attention in case of complaints.

After inhalation:

Supply fresh air. Consult physician if symptoms persist.

After skin contact:

Wash off with plenty of water and soap. Consult a physician if irritation persists.

After eye contact:

Immediately flush open eyes with plenty of water. Seek medical attention if irritation persists.

After ingestion:

Rinse mouth with plenty of water. Immediately get medical help.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms:

Cough, nausea, gastrointestinal complaints.

Effects:

Indication of any Immediate Medical Attention and special Treatment needed
4.3. Treatment:

Treat symptomatically.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media:

Special powder for metal fires (Class D), graphite
Dry sand.

Unsuitable extinguishing media:

Water

5.2. Special Hazards arising from the Substance or Mixture

Special hazards:

In case of fire: formation of toxic gases/vapors.

5.3. Advice for Firefighters

Protective equipment:

Wear self-contained respiratory protective device.
Wear suitable protective clothing.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions:

Avoid contact with skin, eyes and clothing. Do not ingest or inhale.
Keep away from sources of ignition. No smoking.
Wear protective clothing.
Avoid formation of dust.

6.2. Environmental Precautions

Environmental precautions:

Do not discharge into drains, surface or ground water in concentrated form.
Contact local authorities if product pollutes soil or vegetation.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material:

Take up mechanically and collect in suitable labelled containers for disposal.

6.4. Reference to other Sections

See Section 13 for information on disposal.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling:

Provide adequate ventilation.
Avoid formation of dust.

Hygienic measures:
7.2. Conditions for Safe Storage, including any Incompatibilities

**Storage conditions:**

Store in tightly sealed containers in a cool and well ventilated location.

Protect product from humidity.

Protect against heat.

**Requirements for storage areas and containers:**

Store the product in the original container.

**Information on fire and explosion protection:**

Do not store together with ignitable sources, heat and fire.

Do not store together with: oxidants, acids, halogenated compounds.

Do not store together with acetylene.

**Storage class (VCI):**

Further Information:

7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

**Parameters to be controlled (DE):**

Copper (CAS 7440-50-8): TLV 1 mg/m³

**Parameters to be controlled:**

Copper (CAS 7440-50-8); OSHA (USA) 1 mg/m³

WEL TWA (UK): 0.2 mg/m³; STEL: 0.6 mg/m³ (calc.), 2 mg/m³ (dust and mist)

**Derived No-Effect Level (DNEL):**

**Predicted No-Effect Concentration (PNEC):**

**Additional Information:**

8.2. Exposure Controls

**Technical protective measures:**

Provide adequate ventilation/exhaust system.

**Personal Protection**

**General protective measures:**

Avoid contact with skin, eyes and clothing.

Keep away from foodstuffs, beverages and feed.

**Respiratory protection:**
Required in case of insufficient ventilation.

Hand protection: Protective gloves (EN 374)

Protective glove material: Please note the manufacturers’ detailed statements, especially about the minimum thickness and the minimum breakthrough time.

Eye protection: Safety glasses (EN 166)

Body protection: Protective clothing.

Environmental precautions: Prevent from getting into the soil, surface water and sewage system.

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Form: powder
Color: reddish-gold
Odor: odorless
Odor threshold: not determined
pH-Value: not applicable
Melting temperature: 750 - 1083°C
Boiling temperature: not applicable
Flash point: not applicable
Evaporation rate: not applicable
Flammability (solid, gas): not available
Upper explosion limit: no information available
Lower explosion limit: no information available
Vapor pressure: not applicable
Vapor density: No information available.
Density: 2.2 - 4.2 g/cm³
54881 Bronze Powder

Solubility in water: insoluble

Coefficient of variation (n-Octanol/Water): not determined

Auto-ignition temperature: not applicable

Decomposition temperature: not determined

Viscosity, dynamic: not applicable

Explosive properties: not explosive

Oxidizing properties: No oxidizing properties

Bulk density:

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic

Burning class:

Solvent content:

Solid content:

Particle size:

Other information:

10. Stability and Reactivity

10.1. Reactivity

Stable if used according to specifications.

10.2. Chemical Stability

Stable if used according to specifications.

10.3. Possibility of Hazardous Reactions

Exothermic reaction with halogenated compounds.

10.4. Conditions to Avoid

Conditions to avoid:

Avoid formation of dust.

Thermal decomposition:

10.5. Incompatible Materials

Oxidizing agents, halogenated compounds, acids, acetylene.

10.6. Hazardous Decomposition Products

Thermal decomposition may yield toxic or irritating gases.

10.7. Further Information

next page: 7
11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD50, oral:
Tin: LD50: > 2000 mg/kg (rat; OECD 423); 72 mg/kg (mouse)

LD50, dermal:
Tin: LD50: > 2000 mg/kg (rat; OECD 402)

LC50, inhalation:
No information available.

Primary effects

Irritant effect on skin:
No irritant effect known.

Irritant effect on eyes:
Product dust may cause irritation.

Inhalation:
No irritant effect known.

Ingestion:
No information available

Sensitization:
No sensitizing effects known.

Mutagenicity:
No mutagenic effects known.

Reproductive toxicity:
No negative effects known.

Cancerogenity:
No cancerogenic effect known.

Teratogenicity:
No teratogenic effects expected.

Specific target organ toxicity (STOT):
No negative effects.

Additional toxicological information:
Aspiration hazard: not applicable

12. Ecological Information

12.1. Aquatic Toxicity

Toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Fish toxicity:
Copper: LC50: 0.01 mg/l (C.Auratus); 0.55 mg/l (12h, Shell)
Tin: LC50: 0.42 mg/l (672h, Oncorhynchus mykiss); 12.4 µg/l (96h, Pimephales promelas)

Daphnia toxicity:
Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

54881  Bronze Powder


Tin: EC50: 1.5 mg/l (504h, Daphnia magna)

Bacteria toxicity:  No data available.

Algae toxicity:  Tin: > 19.2 µg/l (72h, Pseudokirchneriella subcapitata)

12.2. Persistence and Degradability

Inorganic substance. Biological degradability is not affected.

12.3. Bioaccumulation

No bioaccumulation.

12.4. Mobility

No information available.

12.5. Results of PBT- und vPvP Assessment

The contents of the preparation do not comply with the criteria for the classification as PBT or vPvB.

12.6. Other Adverse Effects

Water hazard class:  Do not let product contaminate ground water, waterways or sewage system.

Behaviour in sewage systems:  
Further ecological effects:

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:  Dispose of according to official national and local regulations.

European Waste Code (EWC):

Uncleaned packaging:

Waste Code No.:  

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA:  3077

14.2. UN Proper Shipping Name

ADR/RID:  UMWELTGEFÄHRDENDER STOFF, FEST, N.A.G. (Kupfer)

IMDG/IATA:  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper)

14.3. Transport Hazard Classes

ADR Class:  9

Hazard no.:  9

Classification code:  M7
Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

54881 Bronze Powder

Revised edition: 11.12.2015
Version: 2.0
Printed: 12.01.2017

Tunnel restriction code: E
IMDG Class (sea): 9
Hazard no.: 9
EmS No.: F-A, S-F
IATA Class: 9
Hazard no.: 9

14.4. Packaging Group
ADR/RID: III
IMDG: III
IATA: III

14.5. Environmental Hazards
Labelling according 5.2.1.8 ADR/RID: fish and tree
Labelling according 5.2.1.6.3 IMDG: fish and tree
Labelled with "P" according 2.10 IMDG: yes

14.6. Special Precautions for User
not applicable

14.7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code
not applicable

14.8. Further Information

15. Regulatory Information

15.1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture
Water hazard class: 0, not hazardous (German Regulation, Assessment by list)

Local regulations on chemical accidents:

Employment restrictions:

Restriction and prohibition of application:
EC. REACH, Section XVII, Restrictions on the Manufacture, Placing on the Market and Use of Certain Dangerous Substances, Preparations and Articles: not applicable

Technical instructions on air quality:

15.2. Chemical Safety Assessment
No information available.

15.3. Further Information

16. Other Information
This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.