

# SAFETY DATA SHEET



Issuing Date 05-Mar-2026

Revision date 05-Mar-2026

Revision Number 1

## 1. Identification

### Product identifier

Product Name Bare Low Fuming Bronze Rod USF

### Other means of identification

Product Code(s) BC00027

Synonyms 02303, 02322, 02323, 02332, 02333

### Recommended use of the chemical and restrictions on use

Recommended use Bare Brazing Rod (requires use USF 02350 brazing flux)

Restrictions on use No information available

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

#### Supplier Address

US Forge, N94W14355 Garwin Mace Dr., Menomonee Falls, WI 53051 USA

### Emergency telephone number

Company Phone Number 1-800-343-3758

Emergency Telephone Chemtrec 1-800-424-9300 Call 911 or emergency medical service

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral

Category 4

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements

#### Warning

#### Hazard statements

Harmful if swallowed



**Appearance** Brazing tig **Physical state** Solid **Odor** Odorless

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product

**Precautionary Statements - Response**

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell  
Rinse mouth

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other information**

Very toxic to aquatic life with long lasting effects  
Very toxic to aquatic life

When this product is used in a welding process, the hazards are mostly from electric shock, heat, radiation, fumes and gases. Electric shock can kill. Arc rays, spatter, and melting metals can severely injure eyes and burn skin. Welding arc and sparks can cause fire

Fumes and gases can be dangerous to your health. Certain medical studies have suggested that nervous system and/or lung damage can result from overexposure to welding fumes and gases

The welding fumes and gases produced from welding rod, coating flux, and base metal in a welding process may contain manganese and manganese compounds, nickel and nickel compounds, chromium (VI) and chromium compound, carbon dioxide, carbon monoxide, nitrogen dioxide, and ozone.

Overexposure to manganese and its compounds may cause metal fume fever and affect the central nervous system. Prolonged inhalation of nickel and chromium (VI) compounds above safe exposure limits can cause cancer

- Unknown acute toxicity** 99.1 % of the mixture consists of ingredient(s) of unknown toxicity  
 60 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
 99.1 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)  
 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**3. Composition/information on ingredients**

**Substance**

Not applicable.

**Mixture**

**Synonyms** 02303, 02322, 02323, 02332, 02333.

| Chemical name | CAS No.   | Weight-% | Trade secret |
|---------------|-----------|----------|--------------|
| Copper        | 7440-50-8 | 45-70    | *            |
| Zinc          | 7440-66-6 | 15-40    | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**4. First-aid measures**

**Description of first aid measures**

**General advice** Show this safety data sheet to the doctor in attendance.

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|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Remove to fresh air.  |
| <b>Eye contact</b>  | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.  |
| <b>Skin contact</b> | Wash skin with soap and water.  |
| <b>Ingestion</b>    | Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. |

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

**Symptoms** No information available.

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

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** No information available.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

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

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

**7. Handling and storage****Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

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

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

**8. Exposure controls/personal protection**

**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

| Chemical name       | ACGIH TLV                       | OSHA PEL   | NIOSH IDLH  |
|---------------------|---------------------------------|--|---|
| Copper<br>7440-50-8 | TWA: 0.2 mg/m <sup>3</sup> fume | TWA: 0.1 mg/m <sup>3</sup> fume<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>(vacated) TWA: 0.1 mg/m <sup>3</sup> Cu<br>dust, fume, mist | IDLH: 100 mg/m <sup>3</sup> dust, fume<br>and mist<br>TWA: 1 mg/m <sup>3</sup> dust and mist<br>TWA: 0.1 mg/m <sup>3</sup> fume |

**Appropriate engineering controls****Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

No special protective equipment required.

**Skin and body protection**

No special protective equipment required.

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Information on basic physical and chemical properties**

|                |                          |
|----------------|--------------------------|
| Physical state | Solid                    |
| Appearance     | Brazing tig              |
| Color          | bronze                   |
| Odor           | Odorless                 |
| Odor threshold | No information available |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| pH                                     | No data available | None known              |
| Melting point / freezing point         | No data available | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | No data available | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability (solid, gas)              | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| Vapor pressure                         | No data available | None known              |
| Vapor density                          | No data available | None known              |
| Relative density                       | No data available | None known              |
| Water solubility                       | No data available | None known              |
| Solubility in other solvents           | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | No data available | None known              |
| Decomposition temperature              | No data available | None known              |
| Kinematic viscosity                    | No data available | None known              |

|                   |                   |            |
|-------------------|-------------------|------------|
| Dynamic viscosity | No data available | None known |
|-------------------|-------------------|------------|

**Other information**

|                      |                          |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Softening point      | No information available |
| Molecular weight     | No information available |
| VOC Content (%)      | No data available        |
| Liquid Density       | No information available |
| Bulk density         | No information available |

**10. Stability and reactivity**

|                                    |   |
|------------------------------------|---|
| Reactivity                         | No information available.                 |
| Chemical stability                 | Stable under normal conditions.           |
| Possibility of hazardous reactions | None under normal processing.             |
| Conditions to avoid                | None known based on information supplied. |
| Incompatible materials             | None known based on information supplied. |
| Hazardous decomposition products   | None known based on information supplied. |

**11. Toxicological information****Information on likely routes of exposure****Product Information**

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available.  |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.  |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available.  |
| <b>Ingestion</b>    | Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components). |

**Symptoms related to the physical, chemical and toxicological characteristics**

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

|                      |              |
|----------------------|--------------|
| <b>ATEmix (oral)</b> | 661.10 mg/kg |
|----------------------|--------------|

**Unknown acute toxicity** 99.1 % of the mixture consists of ingredient(s) of unknown toxicity

- 60 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
- 99.1 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
- 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
- 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
- 99.1 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Component Information**

| Chemical name     | Oral LD50           | Dermal LD50 | Inhalation LC50 |
|-------------------|---------------------|-------------|-----------------|
| Zinc<br>7440-66-6 | = 630 mg/kg ( Rat ) | -           | -               |

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | No information available.                      |
| <b>Serious eye damage/eye irritation</b> | No information available.                      |
| <b>Respiratory or skin sensitization</b> | No information available.                      |
| <b>Germ cell mutagenicity</b>            | No information available.                      |
| <b>Carcinogenicity</b>                   | No information available.                      |
| <b>Reproductive toxicity</b>             | No information available.                      |
| <b>STOT - single exposure</b>            | No information available.                      |
| <b>STOT - repeated exposure</b>          | No information available.                      |
| <b>Target organ effects</b>              | liver, kidney, Respiratory system, Eyes, Skin. |
| <b>Aspiration hazard</b>                 | No information available.                      |
| <b>Other adverse effects</b>             | No information available.                      |
| <b>Interactive effects</b>               | No information available.                      |

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

| Chemical name       | Algae/aquatic plants  | Fish  | Toxicity to microorganisms | Crustacea                                    |
|---------------------|---|---|----------------------------|--|
| Copper<br>7440-50-8 | EC50: 0.0426 - 0.0535mg/L (72h, Pseudokirchneriella subcapitata) EC50: 0.031 - 0.054mg/L (96h, Pseudokirchneriella subcapitata) | LC50: 0.0068 - 0.0156mg/L (96h, Pimephales promelas) LC50: =0.3mg/L (96h, Cyprinus carpio) LC50: =0.8mg/L (96h, Cyprinus carpio) LC50: =0.2mg/L (96h, Pimephales promelas) LC50: =1.25mg/L (96h, Lepomis macrochirus) LC50: =0.112mg/L (96h, Poecilia reticulata) LC50: <0.3mg/L (96h, Pimephales promelas) LC50: =0.052mg/L (96h, Oncorhynchus mykiss) | -                          | EC50: =0.03mg/L (48h, Daphnia magna)         |
| Zinc<br>7440-66-6   | EC50: 0.11 - 0.271mg/L (96h, Pseudokirchneriella subcapitata) EC50: 0.09 - 0.125mg/L (72h, Pseudokirchneriella subcapitata)     | LC50: 2.16 - 3.05mg/L (96h, Pimephales promelas) LC50: 0.211 - 0.269mg/L (96h, Pimephales promelas) LC50: =0.24mg/L (96h,   | -                          | EC50: 0.139 - 0.908mg/L (48h, Daphnia magna) |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  | Oncorhynchus mykiss)<br>LC50: =0.59mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: =2.66mg/L (96h,<br>Pimephales promelas)<br>LC50: =30mg/L (96h,<br>Cyprinus carpio) LC50:<br>=7.8mg/L (96h, Cyprinus<br>carpio) LC50: =0.45mg/L<br>(96h, Cyprinus carpio)<br>LC50: =3.5mg/L (96h,<br>Lepomis macrochirus)<br>LC50: =0.41mg/L (96h,<br>Oncorhynchus mykiss) |  |  |
|--|--|--|--|--|

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

**Other adverse effects** No information available.

### 13. Disposal considerations

**Waste treatment methods**

**Waste from residues/unused products** Dispose of waste in accordance with environmental legislation. Dispose of in accordance with local regulations.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical name       | California Hazardous Waste Status |
|---------------------|-----------------------------------|
| Copper<br>7440-50-8 | Toxic                             |
| Zinc<br>7440-66-6   | Ignitable powder                  |

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

## 15. Regulatory information

### International Inventories

**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AICS** Contact supplier for inventory compliance status.

#### Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

#### **CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name       | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Copper<br>7440-50-8 | -                           | X                      | X                         | -                          |
| Zinc<br>7440-66-6   | -                           | X                      | X                         | -                          |

#### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name       | Hazardous Substances RQs | Extremely Hazardous Substances RQs |
|---------------------|--------------------------|------------------------------------|
| Copper<br>7440-50-8 | 5000 lb                  | -                                  |
| Zinc<br>7440-66-6   | 1000 lb                  | -                                  |

### US State Regulations

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations****US State Regulations**

| Chemical name       | New Jersey | Massachusetts | Pennsylvania |
|---------------------|------------|---------------|--------------|
| Copper<br>7440-50-8 | X          | X             | X            |
| Zinc<br>7440-66-6   | X          | X             | X            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

|             |                  |                |                    |                                    |
|-------------|------------------|----------------|--------------------|------------------------------------|
| <b>NFPA</b> | Health hazards 1 | Flammability 0 | Instability 0      | Physical and chemical properties - |
| <b>HMIS</b> | Health hazards 1 | Flammability 0 | Physical hazards 0 | Personal protection X              |

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | *    | Skin designation                 |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

|                      |                           |
|----------------------|---------------------------|
| <b>Issuing Date</b>  | 05-Mar-2026               |
| <b>Revision date</b> | 05-Mar-2026               |
| <b>Revision Note</b> | No information available. |
| <b>Disclaimer</b>    |                           |

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**