



LTS Research Laboratories, Inc.
Safety Data Sheet
Iron Metal

1. Product and Company Identification

Trade Name: Iron Metal
Chemical Formula: Fe
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 2001 Oaks Pkwy
City: Belmont
State: North Carolina
Zip Code: 28012
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Warning



Hazard Statements: H228: Flammable solid
H252: Self-heating in large quantities; may catch fire

Precautionary Statements: P210: Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking
P235 + P410: Keep cool. Protect from sunlight
P240: Ground/bond container and receiving equipment
P241: Use explosion-proof electrical/ ventilating/ lighting/ equipment
P280: Wear protective gloves/ eye protection/ face protection
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish
P403 + P235: Store in a well-ventilated place. Keep cool
P407: Maintain air gap between stacks/ pallets
P420: Store away from other materials

| HMIS Health Ratings (0-4): | Powder | Bulk |
|----------------------------|--------|------|
| Health: | 1 | 0 |
| Flammability: | 2 | 0 |
| Physical: | 1 | 0 |

3. Composition

Chemical Family: Metal
Additional Names: None

Iron (Fe)
Percentage: 100 wt%
CAS #: 7439-89-6
EC #: 231-096-4

4. First Aid Procedures

| | |
|---------------------|---|
| General Treatment: | Seek medical attention if symptoms persist. |
| Special Treatment: | None |
| Important Symptoms: | N/A |
| Inhalation: | Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention. |
| Ingestion: | Rinse mouth with water. Do not induce vomiting. Seek medical attention. |
| Skin: | Wash affected area with mild soap and water. Remove any contaminated clothing. Seek medical attention. |
| Eyes: | Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention. |

5. Firefighting Measures

| | |
|--------------------------------|--|
| Flammability: | Flammable as powder |
| Extinguishing Media: | No special restrictions – use suitable extinguishing agent for surrounding material and type of fire. Do not use water for metal fires – use CO ₂ , sand, extinguishing powder. |
| Spec. Fire Fighting Procedure: | Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products. |

6. Accidental Release Measures

| | |
|----------------------------------|--|
| If Material Is Released/Spilled: | Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. |
| Environmental Precautions: | Isolate runoff to prevent environmental pollution. |

7. Handling and Storage

| | |
|----------------------------|--|
| Handling Conditions: | Wash thoroughly after handling. |
| Storage Conditions: | Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10. |
| Work/Hygienic Maintenance: | Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air. |
| Ventilation: | Provide sufficient ventilation to maintain concentration at or below threshold limit. |

8. Exposure Controls and Personal Protection

| | |
|------------------------------|---|
| Permissible Exposure Limits: | N/A |
| Threshold Limit Value: | N/A |
| Special Equipment: | None |
| Respiratory Protection: | Dust Respirator |
| Protective Gloves: | Rubber gloves Check gloves prior to each use |
| Eye Protection: | Safety glasses or goggles |
| Body Protection: | Protective work clothing. Wear close-toed shoes and long sleeves/pants. |

9. Physical and Chemical Characteristics

| | |
|---------------------------|--|
| Color | Grey |
| Form: | Powder, Granules, Pellets, Sputtering target, Custom parts |
| Odor: | Odorless |
| Water Solubility: | Insoluble |
| Boiling Point: | 2750 °C |
| Melting Point: | 1535 °C |
| Flash Point: | N/A |
| Autoignition Temperature: | N/A |
| Density: | 7.86 g/cm ³ |
| Molecular weight: | 55.845 g/mol |

10. Reactivity

| | |
|-----------------------------------|---|
| Stability: | Stable under recommended storage conditions |
| Reacts With: | Strong oxidizing agents, Acids, Fluorine, halogenated agents, Halogens, oxygen, nitriles, Aldehydes |
| Incompatible Conditions: | Avoid dust formation, Excess heat, Exposure to moist air or water |
| Hazardous Decomposition Products: | Metal oxide fume, Iron oxides, Hydrogen |

11. Toxicological Information

| | |
|--------------------------------|------------------------------|
| Potential Health Effects: | |
| Eyes: | May cause irritation |
| Skin: | May cause irritation |
| Ingestion: | May cause irritation |
| Inhalation: | May cause irritation |
| Chronic: | N/A |
| Signs & Symptoms: | N/A |
| Aggravated Medical Conditions: | N/A |
| Median Lethal Dose: | 30000 mg/kg for rat by mouth |
| Carcinogen: | N/A |

12. Ecological Information

| | |
|--|-----|
| Aquatic Toxicity: | Low |
| Persistent Bioaccumulation Toxicity: | No |
| Very Persistent, Very Bioaccumulative: | No |
| Notes: | N/A |

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous as powder only



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives

Packing Group: III

UN Number: UN3089

Proper Shipping Name: Metal powders, flammable, n.o.s. (Iron)

15. Regulatory Information

Sec 302 Extremely Hazardous: No

Sec 304 Reportable Quantities: N/A

Sec 313 Toxic Chemicals: No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

Document Last Revised: 08/15/2023