



# Material Safety Data Sheet (MSDS)

## for Steel Rebar

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Steel Rebar
- **Synonyms:** Reinforcing Bar, Rebar, Steel Reinforcement
- **CAS Number:** Not applicable (mixture)
- **Manufacturer/Supplier:** ATDM CO

### SECTION 2: HAZARD IDENTIFICATION

- **GHS Classification:**
  - Not classified as hazardous under GHS regulations.
- **Hazard Statements:**
  - Can cause mechanical injury (cuts, abrasions) when handled improperly.
  - Inhalation of metal dust or fumes (during cutting, welding, or grinding) may cause respiratory irritation.
- **Precautionary Statements:**
  - Use proper protective equipment when handling.
  - Avoid inhaling dust, fumes, or particles generated from cutting or welding.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Composition:**
    - Iron (Fe): 90-98%
    - Carbon (C): 0.1-0.5%
    - Manganese (Mn): 0.2-1.5%
    - Silicon (Si): 0.1-0.3%
    - Sulfur (S) & Phosphorus (P): <0.05%
    - Other alloying elements may include chromium, nickel, molybdenum, and vanadium depending on grade.
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#### SECTION 4: FIRST-AID MEASURES

- **Inhalation:** If exposed to fumes, move to fresh air and seek medical attention if symptoms persist.
- **Skin Contact:** Wash with soap and water if irritation occurs. Seek medical attention for cuts or abrasions.
- **Eye Contact:** Rinse thoroughly with water. Seek medical attention if irritation persists.
- **Ingestion:** Not a typical route of exposure. Seek medical attention if ingestion occurs.

#### SECTION 5: FIRE-FIGHTING MEASURES

- **Flammability:** Non-flammable
- **Extinguishing Media:** Not applicable. Use appropriate extinguishing media for surrounding materials.
- **Hazardous Combustion Products:** Metal fumes may be released if subjected to extreme heat.
- **Protective Equipment:** Firefighters should use self-contained breathing apparatus if fumes are present.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Use proper PPE (gloves, eye protection) when handling.
- **Environmental Precautions:** No special environmental precautions required.
- **Cleanup Methods:** Collect material and store properly. Dispose of scrap metal in accordance with local regulations.

#### SECTION 7: HANDLING AND STORAGE

- **Handling:**
  - Use protective gloves to prevent cuts.
  - Avoid generating dust and fumes during processing.
- **Storage:**
  - Store in a dry, well-ventilated area.
  - Avoid exposure to moisture to prevent corrosion.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Occupational Exposure Limits:**
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- OSHA PEL for Iron Oxide: 10 mg/m<sup>3</sup>
- ACGIH TLV for Manganese: 0.2 mg/m<sup>3</sup>
- **Engineering Controls:** Provide adequate ventilation when welding or cutting.
- **Personal Protective Equipment (PPE):**
  - **Respiratory Protection:** Required when cutting or welding to avoid inhalation of fumes.
  - **Eye Protection:** Safety glasses or face shields.
  - **Hand Protection:** Cut-resistant gloves.
  - **Body Protection:** Protective clothing to minimize skin exposure.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Solid, gray metal rod
- **Odor:** Odorless
- **Melting Point:** ~1,370 - 1,530°C (2,500 - 2,800°F)
- **Density:** ~7.85 g/cm<sup>3</sup>
- **Solubility in Water:** Insoluble
- **Boiling Point:** Not applicable

#### SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal conditions.
- **Reactivity:** Not reactive under normal conditions.
- **Hazardous Decomposition Products:** Metal fumes may be generated when heated above melting point.

#### SECTION 11: TOXICOLOGICAL INFORMATION

- **Potential Health Effects:**
    - Inhalation of fumes may cause respiratory irritation.
    - Long-term exposure to metal dust may cause lung effects.
    - Skin contact may cause irritation or cuts.
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#### SECTION 12: ECOLOGICAL INFORMATION

- **Environmental Impact:** Non-toxic, does not degrade.
- **Persistence and Degradability:** Not biodegradable.
- **Bioaccumulation:** Not expected.

#### SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal Methods:** Recycle whenever possible. Dispose of according to local regulations.
- **Hazardous Waste Classification:** Not considered hazardous waste.

#### SECTION 14: TRANSPORT INFORMATION

- **DOT Classification:** Not regulated
- **UN Number:** Not applicable
- **Shipping Name:** Not applicable
- **Hazard Class:** Not applicable

#### SECTION 15: REGULATORY INFORMATION

- **OSHA:** Considered an article under OSHA standards.
- **TSCA:** Components listed.
- **CERCLA:** Reportable quantities may apply for specific metal components.

#### SECTION 16: OTHER INFORMATION

- **Prepared By:** ATDM CO
- **Date of Issue:** 2025.02.27
- **Disclaimer:** The information provided in this MSDS is based on available data and is accurate to the best of our knowledge. However, it does not constitute a guarantee or warranty. Users must determine the suitability of this information for their specific use and ensure compliance with applicable regulations.