



MATERIAL SAFETY DATA SHEET (MSDS)

Steel Rebar

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Steel Rebar (Reinforcing Steel Bar)
- **Chemical Name:** Carbon Steel Alloy
- **CAS Number:** Not applicable (Mixture)
- **Manufacturer/Supplier:** Basekim
- **Recommended Use:** Reinforcement of concrete structures in construction.

SECTION 2: HAZARD IDENTIFICATION

- **Classification:** Not classified as hazardous under normal conditions.
- **Hazard Symbols:** None
- **Signal Word:** None
- **Hazard Statements:**
 - May cause mechanical injury (cuts, abrasions) during handling.
 - Can produce hazardous fumes if subjected to high temperatures (welding, cutting).
- **Precautionary Statements:**
 - Wear protective gloves and eye protection when handling.
 - Use proper ventilation when welding or cutting.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	% Composition
Iron (Fe)	7439-89-6	90-99%
Carbon (C)	7440-44-0	0.05-0.30%
Manganese (Mn)	7439-96-5	0.30-1.50%
Silicon (Si)	7440-21-3	0.15-0.80%
Sulfur (S)	7704-34-9	< 0.05%
Phosphorus (P)	7723-14-0	< 0.05%
Other Trace Elements	Various	< 0.10%

SECTION 4: FIRST-AID MEASURES

- **Inhalation:** If welding fumes are inhaled, move to fresh air. Seek medical attention if symptoms persist.
- **Skin Contact:** Wash thoroughly with soap and water if irritation occurs. Treat cuts and abrasions as necessary.
- **Eye Contact:** Rinse with clean water if dust or debris enters the eye. Seek medical attention if irritation persists.
- **Ingestion:** Not applicable under normal use. Seek medical attention if ingested.

SECTION 5: FIRE-FIGHTING MEASURES

- **Flash Point:** Non-combustible
- **Extinguishing Media:** Use appropriate extinguishing media for surrounding fire.
- **Special Hazards:** Welding or cutting may produce hazardous fumes.
- **Protective Equipment:** Firefighters should use self-contained breathing apparatus (SCBA) when fighting fires involving welding fumes.

SECTION 6: ACCIDENTAL RELEASE MEASURES



- **Personal Precautions:** Wear protective gloves and safety shoes when handling.
- **Environmental Precautions:** No significant environmental hazard. Collect and recycle scrap materials.
- **Cleanup Methods:** Sweep up and dispose of in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

- **Handling:**
 - Avoid contact with sharp edges. Use proper lifting techniques.
 - Use appropriate ventilation when welding or cutting.
- **Storage:**
 - Store in a dry, well-ventilated area.
 - Keep away from corrosive substances.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Exposure Limits:**
 - OSHA PEL (Iron oxide fume): 10 mg/m³
 - ACGIH TLV (Iron oxide fume): 5 mg/m³
- **Engineering Controls:** Provide adequate ventilation for welding or cutting operations.
- **Personal Protective Equipment (PPE):**
 - **Eyes:** Safety goggles or face shield when cutting or welding.
 - **Skin:** Protective gloves to prevent cuts.
 - **Respiratory:** Use appropriate respiratory protection if exposed to fumes.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Solid, gray metallic bars
- **Odor:** Odorless
- **Melting Point:** ~1,370 - 1,540°C (2,500 - 2,800°F)
- **Boiling Point:** Not applicable
- **Solubility:** Insoluble in water
- **Density:** 7.85 g/cm³
- **pH:** Not applicable

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Not reactive under normal conditions.
- **Chemical Stability:** Stable under normal conditions.
- **Conditions to Avoid:** Exposure to strong acids or oxidizing agents.
- **Hazardous Decomposition Products:** Welding or burning may produce metal oxides and toxic fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** Not classified as toxic.
- **Chronic Effects:** Long-term exposure to metal dust or welding fumes may cause respiratory issues.
- **Carcinogenicity:** Iron and steel are not classified as carcinogenic. However, welding fumes may contain carcinogenic substances.

SECTION 12: ECOLOGICAL INFORMATION

- **Environmental Impact:** Not considered hazardous.
- **Persistence & Degradability:** Non-biodegradable but recyclable.
- **Bioaccumulation:** Not expected to bioaccumulate.

SECTION 13: DISPOSAL CONSIDERATIONS



- **Disposal Methods:** Recycle whenever possible. Dispose of waste in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORT INFORMATION

- **DOT Classification:** Not regulated as hazardous material.
- **UN Number:** Not applicable
- **Proper Shipping Name:** Steel Rebar
- **Hazard Class:** Not applicable

SECTION 15: REGULATORY INFORMATION

- **OSHA:** Complies with OSHA Hazard Communication Standard.
- **EPA Regulations:** Not classified as hazardous.
- **Other Regulations:** Complies with applicable national and local regulations.

SECTION 16: OTHER INFORMATION

- **Revision Date:** 2025.03.11
- **Disclaimer:** The information provided in this MSDS is based on current knowledge and experience. It is intended as a guideline for safe handling, use, processing, storage, and disposal of the product. No warranty is expressed or implied regarding the accuracy or completeness of this information. Users are responsible for ensuring compliance with local regulations and safe handling practices.