



Material Safety Data Sheet (MSDS)

Chromium Metal (High-Purity Grade, $\geq 99\%$)

Section 1: Product and Company Identification

Product Name: Chromium Metal

Synonyms: Chromium, Cr Metal

Company Identification:

Basekim Kimyasal Ürünler LTD

Turan Gunes Blv. Ilkbahar Mah. Sinpas Altinoran Tower 2, Floor 1, Unit 146

Ankara, Turkey

Transportation Emergency Response: Logistics: 88552948

Health Emergency Contact:

Basekim Emergency Information Center (Ankara):

+90 312 514 7055 or +90 312 514 7081

International collect calls accepted

Product Information / MSDS Requests:

+90 312 514 7055 / +90 312 514 7081

Section 2: Composition/Information on Ingredients

- **Substance:** Chromium (Cr)
- **CAS Number:** 7440-47-3
- **Purity:** 99% minimum
- **Typical Impurities:**



- $\text{Fe} \leq 0.28\%$
- $\text{Al} \leq 0.05\%$
- $\text{Si} \leq 0.14\%$
- $\text{C} \leq 0.009\%$
- $\text{P} \leq 0.005\% \text{ max}$

Section 3: Hazards Identification

Classification (GHS):

- Skin Irritation (Category 2)
- Eye Irritation (Category 2B)
- Specific Target Organ Toxicity – Repeated Exposure (Category 2, respiratory system)

Hazard Statements:

- H315: Causes skin irritation.
- H320: Causes eye irritation.
- H335: May cause respiratory irritation.
- H373: May cause damage to lungs through prolonged or repeated exposure (dust/fumes).

Signal Word: Warning

Precautionary Statements:

- Avoid breathing dust/fumes.
- Wear protective gloves and safety goggles.
- Use local exhaust ventilation.
- Wash hands thoroughly after handling.



Section 4: First Aid Measures

- **Inhalation:** Move exposed person to fresh air. If symptoms persist, seek medical attention.
- **Skin Contact:** Wash thoroughly with soap and water. Seek medical advice if irritation develops.
- **Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses if present. Seek medical attention if irritation continues.
- **Ingestion:** Rinse mouth with water. Do not induce vomiting. Seek medical advice.

Section 5: Firefighting Measures

- **Suitable Extinguishing Media:** Dry sand, dry chemical, or CO₂.
- **Unsuitable Media:** Do not use water on molten chromium.
- **Special Hazards:** Finely divided chromium dust may form explosive mixtures with air.
- **Protective Equipment:** Firefighters should wear SCBA and protective clothing.

Section 6: Accidental Release Measures

- **Personal Precautions:** Avoid dust generation. Use protective equipment.
- **Environmental Precautions:** Prevent entry into drains, waterways, or soil.
- **Cleanup Procedures:** Sweep or vacuum using HEPA filter. Collect in sealed containers for recycling or disposal.

Section 7: Handling and Storage

- **Handling:** Use proper ventilation. Avoid inhalation of dust and contact with skin/eyes.
- **Storage:** Keep containers tightly closed in a dry, well-ventilated area. Protect from



moisture and oxidizing agents.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits:

- OSHA PEL: 1 mg/m³ (TWA, metal and insoluble salts)
- ACGIH TLV: 0.5 mg/m³ (TWA, metal and insoluble salts)

Engineering Controls:

- Provide adequate ventilation or local exhaust.

PPE:

- **Respiratory Protection:** Use approved respirator if dust levels exceed exposure limits.
- **Eye Protection:** Safety goggles or face shield.
- **Skin Protection:** Gloves and protective clothing.
- **Hygiene Measures:** Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

- **Appearance:** Hard, steel-gray metallic solid
- **Molecular Weight:** 51.996 g/mol
- **Melting Point:** 1907 °C
- **Boiling Point:** 2671 °C
- **Density:** 7.14 g/cm³
- **Solubility:** Insoluble in water



- **Odor:** Odorless

Section 10: Stability and Reactivity

- **Stability:** Stable under recommended conditions.
- **Reactivity:** Reacts with strong acids and oxidizers.
- **Hazardous Decomposition Products:** Chromium oxides may form at high temperatures.

Section 11: Toxicological Information

- **Acute Toxicity:** Low acute oral toxicity.
- **Skin/Eye Irritation:** Causes irritation.
- **Chronic Effects:** Prolonged exposure to chromium dust may cause respiratory irritation and lung effects.
- **Carcinogenicity:** Elemental chromium metal is not classified as carcinogenic (unlike hexavalent chromium compounds).

Section 12: Ecological Information

- **Ecotoxicity:** May be harmful to aquatic organisms in high concentrations.
- **Persistence/Degradability:** Not biodegradable.
- **Bioaccumulation Potential:** Chromium can accumulate in aquatic species.
- **Environmental Note:** Avoid release into environment.

Section 13: Disposal Considerations



- Dispose of according to local, regional, and national regulations.
- Recycling of chromium scrap is recommended where possible.

Section 14: Transport Information

- **UN Number:** Not regulated as hazardous for transport.
- **Proper Shipping Name:** Chromium Metal
- **Hazard Class:** Not classified as dangerous goods.
- **Packing Group:** Not applicable.

Section 15: Regulatory Information

- Subject to EU REACH and OSHA workplace exposure monitoring.
- Not listed as a carcinogen in IARC/OSHA for elemental chromium metal.

Section 16: Other Information

Disclaimer:

This MSDS is based on the latest technical information and international safety standards. The information is believed to be accurate at the date of issue but is provided without warranty.

Users are responsible for ensuring safe handling, use, storage, and compliance with all applicable laws and regulations.