



## **Material Safety Data Sheet (MSDS) - Chlorine**

Product Name: Chlorine

Purity: 65%

Manufacturer: Chlor Iran

CAS Number: 7782-50-5

### **Physical and Chemical Properties**

- Physical State: Greenish-yellow gas
- Odor: Pungent and suffocating
- Vapor Density: 2.49 (relative to air)
- Water Solubility: Soluble, producing hypochlorous acid and hydrochloric acid

### **Fire Triangle**

Chlorine, as a strong oxidizer, can act as a fire and explosion hazard in reaction with organic and metallic materials. For the fire triangle, the three main components are heat, fuel, and an oxidizing agent. In the case of chlorine, it acts as a strong oxidizer and can rapidly react with other materials, potentially causing fire or explosions.

### **Physical and Chemical Hazards**

Chlorine reacts with most metals and organic compounds at room temperature. It forms corrosive acids when in contact with moisture and may cause fire and explosions.

## **Precautionary Measures**

1. Contact Prevention: Use chemical-resistant gloves and appropriate eye and face protection.
2. Ventilation: Ensure adequate ventilation with standard filtered masks if necessary.
3. Storage Conditions: Store below 52°C, away from flammable materials.

## **First Aid Measures**

Inhalation: Move to fresh air and, if needed, use artificial respiration.

Eye or Skin Contact: Rinse immediately with clean water for at least 15 minutes and seek medical assistance.

Ingestion: Although ingestion is not common, the liquid form may cause severe pain.

## **Health Hazards**

Chlorine can irritate the respiratory system, cause coughing, shortness of breath, and, with prolonged exposure, damage to the lungs and other organs. Using protective equipment to minimize exposure and maintaining safety measures is essential.

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