Potassium Carbonate MSDS

1. Product Name and Identification

Product Name: Potassium Carbonate
Synonyms: Dipotassium carbonate, Potash
CAS Number: 584-08-7
Chemical Formula: K_2CO_3
Manufacturer/Distributor Contact Information:
(To be provided by the supplier, including address and emergency phone number)

2. Composition/Ingredients

Substance: Pure substance
Chemical Name: Potassium Carbonate
Concentration: 100%
CAS Number: 584-08-7
No hazardous impurities are detected in the composition.

3. Hazards Identification

Classification

- **GHS Classification**:
  - Skin irritation (Category 2)
  - Eye irritation (Category 2A)
- **Health Hazards**:
  - May cause mild to moderate irritation to the skin and eyes.
  - Dust particles may irritate the respiratory tract if inhaled.

Label Elements

- **Signal Word**: Warning
- **Hazard Statements**:
  - H315: Causes skin irritation.
  - H319: Causes serious eye irritation.
- **Precautionary Statements**:
  - P280: Wear protective gloves, clothing, and eye protection.
  - P261: Avoid inhaling dust.
  - P305+P351+P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present.

4. First Aid Measures

General Advice
Seek medical attention immediately if symptoms persist or exposure is severe.

- **Eyes**: Rinse thoroughly with water for at least 15 minutes. Remove contact lenses if applicable. Seek medical help if irritation continues.
- **Skin**: Wash affected areas with soap and water. Remove contaminated clothing. Get medical attention if irritation persists.
- **Inhalation**: Move the individual to fresh air. If breathing problems arise, contact medical services.
- **Ingestion**: Rinse mouth with water. Do not induce vomiting. Seek medical attention immediately if discomfort develops.

5. Handling and Storage

Handling

- Avoid generating dust. Handle in a well-ventilated area.
- Prevent contact with skin, eyes, and clothing.
- Use appropriate protective equipment. Ensure proper industrial hygiene practices.

Storage

- Store in a tightly sealed container in a cool, dry, and well-ventilated space.
- Keep away from moisture and incompatible materials like acids.

6. Exposure Controls/Personal Protection

Engineering Controls

- Ensure adequate ventilation to reduce dust concentration. Use local exhaust systems if necessary.

Personal Protective Equipment (PPE)

- **Eye Protection**: Wear protective goggles or a face shield.
- **Skin Protection**: Use chemical-resistant gloves and body-covering clothing.
- **Respiratory Protection**: Use an approved dust mask or respirator in poorly ventilated areas or if dust levels exceed permissible limits.

Hygiene Measures
Wash hands and exposed areas thoroughly after handling. Do not eat, drink, or smoke in the work area.

7. Physical and Chemical Properties

- **Appearance**: White crystalline powder or granules
- **Odor**: Odorless
- **Molecular Weight**: 138.21 g/mol
- **Melting Point**: 891°C
- **Boiling Point**: Not applicable (decomposes before boiling)
- **Flash Point**: Non-flammable
- **Solubility in Water**: Highly soluble
- **Density** (at 20°C): ~2.43 g/cm³
- **pH** (10% solution): ~11.5–12.5
- **Vapor Pressure**: Not applicable

8. Stability and Reactivity

Chemical Stability

- Stable under normal handling and storage conditions.

Reactivity

- Reacts violently with acids, releasing carbon dioxide gas.

Conditions to Avoid

- Avoid exposure to moisture, incompatible materials, and sources of extreme heat.

Hazardous Decomposition Products

- When heated, may release potassium oxide fumes.

9. Toxicological Information

Acute Toxicity

- **Oral (LD50/Rat)**: ~1870 mg/kg
- Toxicity is low but ingestion may cause gastrointestinal discomfort.

Skin and Eye Irritation

- Prolonged or repeated contact may cause irritation.
- Direct contact with eyes may result in significant irritation or pain.

Respiratory Effects

- Dust inhalation may irritate the respiratory passages.

Carcinogenicity

- Not classified as a carcinogen by IARC, NTP, or OSHA.

Chronic Effects

- Prolonged exposure may worsen pre-existing skin or respiratory conditions.

10. Disposal Considerations

- Dispose of in compliance with local, regional, and national environmental regulations.
- Do not release into drains or waterways without proper treatment.
- Contaminated containers must be rinsed thoroughly before reuse or disposed of as hazardous waste.