Basekim
Chemical Production Co.Ltd

# Material Safety Data Sheet (MSDS)

## Food Grade Trisodium Citrate

### 1. Identification

**Product Name:** Food Grade Trisodium Citrate
**Chemical Name:** Trisodium Citrate / Sodium Citrate Tribasic
**E Number:** E331(iii)
**CAS No. (Dihydrate):** 6132-04-3
**CAS No. (Anhydrous):** 68-04-2
**Supplier:** Basekim
**Recommended Use:** Food additive, acidity regulator, buffering agent, emulsifying salt, stabilizer, and sequestrant.

### 2. Hazard Identification

**Classification:** Generally not classified as hazardous under normal handling conditions.

**Potential Effects:**

- Dust may cause mild eye irritation.
- Prolonged dust exposure may irritate the respiratory system.
- Repeated skin contact may cause mild dryness or irritation in sensitive individuals.
- Ingestion should follow approved food-use limits and formulation requirements.

**Signal Word:** Not applicable under normal classification.

### 3. Composition / Information on Ingredients

**Substance:** Trisodium Citrate

**Chemical Formula:**

- Anhydrous: $C_6H_5Na_3O_7$
- Dihydrate: $C_6H_5Na_3O_7 \cdot 2H_2O$

**Molecular Weight:**

- Anhydrous: 258.07 g/mol
- Dihydrate: 294.10 g/mol

**Purity:** Typically ≥99%, depending on product specification.

## 4. First Aid Measures

**Eye Contact:**
Rinse carefully with clean water for several minutes. Remove contact lenses if easy to do. Seek medical attention if irritation continues.

**Skin Contact:**
Wash affected skin with soap and water. Remove contaminated clothing if necessary.

**Inhalation:**
Move the affected person to fresh air. Seek medical attention if breathing discomfort persists.

**Ingestion:**
Rinse mouth with water. If a large unintended quantity is swallowed or discomfort develops, seek medical advice.

## 5. Fire-Fighting Measures

**Flammability:** Not considered highly flammable.

**Suitable Extinguishing Media:**
Use water spray, dry chemical, foam, or carbon dioxide according to surrounding fire conditions.

**Hazardous Combustion Products:**
Thermal decomposition may produce carbon oxides and sodium-containing compounds.

**Protective Equipment:**
Firefighters should use suitable protective clothing and self-contained breathing equipment where necessary.

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## 6. Accidental Release Measures

- Avoid generating excessive dust.
- Use appropriate personal protective equipment.
- Sweep or vacuum spilled material using suitable dust-control methods.
- Place recovered material in an appropriate container.
- Prevent large quantities from entering drains or waterways.
- Clean the affected surface with water if appropriate.

## 7. Handling and Storage

**Handling:**

- Avoid unnecessary dust formation.
- Prevent contamination of food-grade material.
- Use clean, dry handling equipment.
- Avoid direct contact with eyes.

**Storage:**

- Store in a cool, dry, well-ventilated location.
- Keep packaging tightly sealed.
- Protect from moisture and contamination.
- Store away from incompatible materials.
- Maintain suitable food-grade warehouse conditions.

## 8. Exposure Controls / Personal Protection

**Respiratory Protection:**
Use suitable dust protection where airborne powder levels are high.

**Eye Protection:**
Safety glasses or goggles are recommended during bulk handling.

**Hand Protection:**
Protective gloves are recommended for prolonged handling.

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**General Hygiene:**
Wash hands after handling. Avoid eating, drinking, or smoking in chemical handling areas.

## 9. Physical and Chemical Properties

| Property | Typical Information |
|---|---|
| Appearance | White crystalline powder or crystals |
| Odor | Practically odorless |
| Solubility | Freely soluble in water |
| pH | Approximately 7.5–9.0 in solution |
| Molecular Weight – Anhydrous | 258.07 g/mol |
| Molecular Weight – Dihydrate | 294.10 g/mol |
| Flash Point | Not applicable |
| Flammability | Low / not readily flammable |
| Physical State | Solid |
| Color | White |

## 10. Stability and Reactivity

**Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:**

- Excessive moisture
- Extreme heat
- Contamination

**Incompatible Materials:**
Strong oxidizing agents and incompatible reactive chemicals.

**Hazardous Decomposition Products:**
Heating or combustion may produce carbon oxides and sodium-containing decomposition products.

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## 11. Toxicological Information

Food Grade Trisodium Citrate generally presents low toxicity when handled according to its intended use.

Possible effects of excessive exposure include:

- Mild eye irritation from dust
- Respiratory irritation from airborne particles
- Mild skin irritation in sensitive individuals
- Gastrointestinal discomfort following excessive unintended ingestion

Normal food applications must comply with applicable food regulations and approved formulation levels.

## 12. Ecological Information

The material is generally considered to have relatively low environmental hazard when properly handled.

Avoid uncontrolled release of large quantities into waterways or the environment.

## 13. Disposal Considerations

Dispose of unused material and contaminated packaging according to local regulations.

Where permitted, small quantities may be handled as non-hazardous chemical waste.

Do not discharge large quantities directly into sewage systems or natural water sources.

## 14. Transport Information

**UN Number:** Not generally regulated as dangerous goods
**Transport Hazard Class:** Not generally classified as hazardous for transport
**Packing Group:** Not applicable

Protect packages from moisture and physical damage during transportation.

## 15. Regulatory Information

Food Grade Trisodium Citrate is commonly identified as **E331(iii)** for permitted food applications.

Users must confirm compliance with regulations applicable to:

- Destination country
- Food category
- Maximum permitted use level
- Product labeling
- Purity specifications

## 16. Other Information

This MSDS provides general safety information for Food Grade Trisodium Citrate.

Actual specifications, regulatory requirements, and handling recommendations may vary according to manufacturer, product grade, production method, and destination market.

For commercial use, buyers should always obtain the latest supplier-specific **SDS, TDS, and Certificate of Analysis (COA)** before handling or using the material.