

# Material Safety Data Sheet

## alpha-Ketoglutaric Acid

ACC# 00805

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** alpha-Ketoglutaric Acid**Catalog Numbers:** BP335250, BP335500, O3348-100**Synonyms:** 2-Oxopentanedioic acid; 2-Oxoglutaric acid; 2-Ketoglutaric acid.**Company Identification:**

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

| CAS#     | Chemical Name           | Percent | EINECS/ELINCS |
|----------|-------------------------|---------|---------------|
| 328-50-7 | alpha-Ketoglutaric acid | 100     | 206-330-3     |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white to off-white solid.

**Warning!** Causes eye irritation and possible injury. May cause skin and respiratory tract irritation. Keep refrigerated. (Store below 4°C/39°F.) The toxicological properties of this material have not been fully investigated.**Target Organs:** Eyes.**Potential Health Effects****Eye:** Causes eye irritation. May result in corneal injury.**Skin:** May cause skin irritation.**Ingestion:** May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated.**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.**Chronic:** No information found.

### Section 4 - First Aid Measures

**Eyes:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.**Skin:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 1; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Refrigeration has been recommended.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

| Chemical Name           | ACGIH       | NIOSH       | OSHA - Final PELs |
|-------------------------|-------------|-------------|-------------------|
| alpha-Ketoglutaric acid | none listed | none listed | none listed       |

**OSHA Vacated PELs:** alpha-Ketoglutaric acid: No OSHA Vacated PELs are listed for this chemical.

### Personal Protective Equipment

**Eyes:** Wear chemical splash goggles.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white to off-white

**Odor:** none reported

**pH:** Acidic in solution.

**Vapor Pressure:** Negligible.

**Vapor Density:** Not available.

**Evaporation Rate:** Negligible.

**Viscosity:** Not available.

**Boiling Point:** 137.8 deg C

**Freezing/Melting Point:** 116 deg C

**Decomposition Temperature:** 137.8 deg C

**Solubility:** Soluble in water.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C<sub>5</sub>H<sub>6</sub>O<sub>5</sub>

**Molecular Weight:** 146.10

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong bases.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 328-50-7 unlisted.

**LD50/LC50:**

Not available.

**Carcinogenicity:**

CAS# 328-50-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

|                       | US DOT                                | Canada TDG                |
|-----------------------|---------------------------------------|---------------------------|
| <b>Shipping Name:</b> | Not regulated as a hazardous material | No information available. |
| <b>Hazard Class:</b>  |                                       |                           |
| <b>UN Number:</b>     |                                       |                           |
| <b>Packing Group:</b> |                                       |                           |

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 328-50-7 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

#### SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

#### SARA Codes

CAS # 328-50-7: immediate.

**Section 313** No chemicals are reportable under Section 313.

#### Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

#### OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

#### STATE

CAS# 328-50-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

### European/International Regulations

**European Labeling in Accordance with EC Directives****Hazard Symbols:**

XI

**Risk Phrases:**

R 41 Risk of serious damage to eyes.

**Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

**WGK (Water Danger/Protection)**

CAS# 328-50-7: 0

**Canada - DSL/NDSL**

CAS# 328-50-7 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List**

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| <b>Section 16 - Additional Information</b> |
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**MSDS Creation Date:** 4/30/1999**Revision #7 Date:** 11/06/2007

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