MATERIAL SAFETY DATA SHEET

Potassium Monohydrogen Alpha-Ketoglutarate

(Monopotassium α-Ketoglutarate · Potassium Hydrogen 2-Oxoglutarate)

Revision Date: 2026-10-30 | GHS 16-Section Format

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier

Product Name	Potassium Monohydrogen Alpha-Ketoglutarate
Synonyms	Monopotassium α-ketoglutarate; Potassium hydrogen 2-oxoglutarate; α-Ketoglutaric acid monopotassium salt
CAS No.	997-43-3
Molecular Formula	$C_5H_5KO_5$
Molecular Weight	184.15

1.2 Relevant identified uses and uses advised against

Identified uses: Raw material for dietary supplements, sports nutrition and functional food.

Uses advised against: Not for direct consumption as raw powder; not for pharmaceutical use without approval.

1.3 Details of the supplier of the safety data sheet

Supplier	Jiangsu Khonor Chemicals Co.,Limited
Address	Rm 1902 Easey Comm Bldg, 253-261, Hennessy RD Wanchai HK
Telephone	+86 19851820538
E-mail	carlos@khonorchem.com

1.4 Emergency telephone number

Emergency Tel: 86-518-85108858

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification: Not classified as a hazardous substance.

- Non-flammable solid; non-explosive; non-oxidising.

2.2 Label elements

Signal Word	None
Hazard Statements	None
Precautionary Statements	P264 Wash hands thoroughly after handling. P280 Wear dust mask when dust may be generated. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present.

2.3 Other hazards

Hygroscopic powder. Dust may cause mild irritation to eyes and respiratory tract. No PBT / vPvB properties.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS No.	Concentration
Potassium Monohydrogen Alpha-Ketoglutarate	997-43-3	≥ 98.0%
Impurities / Moisture	—	≤ 2.0%

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Move person to fresh air. If cough or discomfort persists, seek medical advice.
Skin Contact	Rinse skin with running water. Remove contaminated clothing.
Eye Contact	Flush eyes with plenty of clean water for at least 10 minutes, lifting eyelids. Consult a doctor if irritation continues.
Ingestion	Rinse mouth with water. Do NOT induce vomiting. Seek medical help if a large amount is swallowed.

4.2 Most important symptoms and effects, both acute and delayed

May cause mild irritation of respiratory tract and eyes on dust exposure. No serious acute toxicity.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No specific antidote.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable: water spray, foam, dry chemical powder, carbon dioxide (CO_2).
- Unsuitable: none.

5.2 Special hazards arising from the substance or mixture

Not combustible. On decomposition under fire, may release carbon oxides and potassium oxide fumes.

5.3 Advice for firefighters

Firefighters wear standard protective equipment and self-contained breathing apparatus. Avoid dust cloud formation.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust inhalation. Wear dust mask, goggles and gloves. Isolate spill area.

6.2 Environmental precautions

Prevent entry into sewers, surface water and soil.

6.3 Methods and material for containment and cleaning up

Collect spilled solid with a clean brush or vacuum (dust-free). Place waste into a sealed container. Clean residue with water.

6.4 Reference to other sections

Refer to Section 8 for exposure controls and personal protection, and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

- Avoid generating dust. Prevent contact with eyes.
- Keep away from strong acids. Use good ventilation.
- Do not eat, drink or smoke during operation.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a tightly closed container in a cool, dry, dark warehouse.
- Protect from moisture (hygroscopic).
- Incompatible materials: strong acids, strong oxidising agents.

7.3 Specific end use(s)

Dietary supplement and sports-nutrition raw material.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

No occupational exposure limit established for this substance.

8.2 Exposure controls

Engineering controls	Local exhaust ventilation to control dust.
Respiratory protection	Dust mask (e.g. FFP1/2) when airborne dust occurs.
Eye protection	Safety goggles.
Hand protection	Rubber / nitrile gloves.
Skin protection	Work clothing; long sleeves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to off-white crystalline powder
Odour	Slight characteristic odour
pH (10% aqueous solution)	5.0 – 7.0
Solubility	Freely soluble in water; slightly soluble in ethanol; insoluble in non-polar solvents
Melting Point	Decomposes before melting
Bulk Density	0.40 – 0.65 g/mL
Particle Size	≥ 95% pass 80 mesh
Hygroscopicity	Hygroscopic
Flammability	Non-flammable
Explosion Limits	Not applicable

Oxidising Properties	None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal handling and storage conditions.

10.2 Chemical stability

Stable when sealed and dry. Unstable under strong acid, high humidity and high temperature.

10.3 Possibility of hazardous reactions

Reaction with strong acid releases alpha-ketoglutaric acid.

10.4 Conditions to avoid

High temperature, moisture, strong UV light.

10.5 Incompatible materials

Strong mineral acids, strong oxidising agents.

10.6 Hazardous decomposition products

Carbon oxides and potassium oxides at high-temperature decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Low toxicity; no significant acute hazard expected (monopotassium α-ketoglutarate is a common supplement ingredient).
Skin corrosion / irritation	May cause mild, transient irritation from dust.
Eye damage / irritation	Mild irritation possible from dust contact.
Sensitisation	Not expected to be a skin sensitiser.
Mutagenicity / Carcinogenicity	No evidence of genotoxic or carcinogenic concern.
Chronic effects	No known chronic health effects at normal industrial-hygiene exposure.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Expected low ecotoxicity; substance is a natural metabolite of the citric-acid cycle.

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bioaccumulative potential

Low bioaccumulation potential.

12.4 Mobility in soil

Water-soluble; avoid large discharges into water bodies.

SECTION 13: DISPOSAL CONSIDERATIONS

- Dispose of in accordance with local, state and national regulations.
- Preferably recycle where feasible; otherwise dispose as non-hazardous chemical waste.
- Do not allow to enter drains or waterways.

SECTION 14: TRANSPORT INFORMATION

UN Number	Not regulated (not dangerous goods)
UN Proper Shipping Name	Not applicable
Transport Hazard Class(es)	Not applicable
Packing Group	Not applicable
Marine Pollutant	No
Transport in bulk	Not applicable

SECTION 15: REGULATORY INFORMATION

- China: potassium monohydrogen α-ketoglutarate is used as a dietary-supplement ingredient; confirm current GB / food-safety status before use.
- EU / USA: subject to national novel-food or supplement regulations where applicable.
- This SDS does not constitute a full regulatory compliance assessment; confirm specific national authorisations before use.

SECTION 16: OTHER INFORMATION

- Sources of key data: manufacturer's analytical data, GHS/CLP guidance.
- This SDS is provided for information and industrial-hygiene purposes; it is the user's responsibility to ensure compliance with applicable laws and regulations.
- Prepared: 2026-10-30 | Revision: 1 | Supersedes: none

— End of Material Safety Data Sheet —