Safety Data Sheet(SDS)

I. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	alpha-ketoglutarate
Product Catalog Number:	M1277
CAS Number:	328-50-7
Company:	APExBIO Technology 7505 Fannin street, Suite 410, Houston, TX 77054, USA +1-832-696-8203 TEL +1-832-641-3177 FAX +1-855-577-7998 EMERGENCY PHONE

II. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:	Skin corrosion/irritation(Category 2),H315 Serious eye damage/eye irritation(Category 1),H318 Serious eye damage/eye irritation(Category 2A),H319 Specific target organ toxicity, single exposure; Respiratory tract irritation(Category 3),H335

III. COMPOSITION/DATA ON COMPONENTS

Formula:	C5H6O5
Molecular Weight :	146.1

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IV. FIRST AID MEASURES

After Inhalation:	If inhaled, remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.
After skin contact:	Flush with copious amounts of water; remove contaminated clothing and shoes; call a physician; Take victim to hospital immediately; call a physician.
After eye contact:	Check for and remove contact lenses and flush with copious amounts of water; assure adequate flushing by separating the eyelids with fingers; call a physician.
After swallowing:	If swallowed, wash out mouth with copious amounts of water; call a physician

V. FIRE FIGHTING MEASURES

Conditions of flammability:	Not flammable or combustible.
Suitable extinguishing media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters:	Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products:	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Sulphur oxides.

VI. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas.
Environmental precautions:	Do not let product enter drains. Prevent further leakage or spillage if safe to do so.

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Methods and materials for containment and cleaning up:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

VII. HANDLING AND STORAGE

Precautions for safe handling:	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage:	Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: Store at -20°C Keep in a dry place.

VIII. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment as follows:	Contains no substances with occupational exposure limit values.
Respiratory protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye protection:	Use equipment for eye protection tested and

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	approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures:	General industrial hygiene practice.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance	No data available
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	No data available
l) Vapour density	No data available

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m) Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

Other safety information

No data available

X. STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	No data available.
Materials to avoid:	Strong acids, Strong bases.

XI. TOXICOLOGICAL INFORMATION

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels

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	greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

XII. ECOLOGICAL INFORMATION

General notes:	No data available.

XIII. DISPOSAL CONSIDERATION

General notes:	Dispose of in accordance with prevailing country, federal, state and local regulations

XIV. TRANSPORT INFORMATION

DOT (US):	This substance is considered to be non-hazardous for transport.
IMDG:	UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F Proper shipping name: Environmentally hazardous substance, solid, n.o.s. Marine pollutant: Marine pollutant
IATA:	UN number: 3077 Class: 9 Packing group: III Proper shipping name: Environmentally hazardous substance, solid, n.o.s.

XV. REGULATIONS

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SARA 302 Components:	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components:	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards:	Acute Health Hazard.
Massachusetts Right To Know Components:	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components:	No components are subject to the New Jersey Right to Know Act.
New Jersey Right To Know Components:	No components are subject to the New Jersey Right to Know Act.
California Prop. 65 Components:	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

XVI. OTHER INFORMATION

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