OXFORD LAB FINE CHEM LLP

Regd Office: Unit no 12, 1st Floor,
Neminath Industrial Estate No.6,
Navghar, Vasai (East), Palghar - 410210.
Maharashtra, INDIA.

Tel: +91 250 2390032 / 2390989 / 2390990
Email: sales@oxfordlabchem.com /
info@oxfordlabchem.com
Web: www.oxfordlabchem.com

Oxford
Range of
Laboratory Chemicals

MATERIAL SAFETY DATA SHEET

a-KETOGLUTARIC ACID 99% (For Synthesis)

MSDS: 328-50-7

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: a-KETOGLUTARIC ACID
CAS#: 328-50-7
Synonym: 2-Oxoglutaric acid 2-Oxopentanedioic acid alpha-Ketoglutaric acid
Chemical Name: Not available.
Chemical Formula: $C_5H_6O_5$

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification:

OXFORD LAB FINE CHEM LLP
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
Navghar, Vasai (East). Palghar - 401 210.
Mumbai, Maharashtra, INDIA.
Tel: 91-250-2390989
Tel/Fax: 91-250-2390032

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
a-KETOGLUTARIC ACID	328-50-7	≤100

Section 3: Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
For the full text of the H-Statements mentioned in this Section
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Xi Irritant R37/38, R41
For the full text of the R-phrases mentioned in this Section,

Other hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 4: First Aid Measures

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed:

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician..

Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed:

No data available

Section 5: Fire and Explosion Data

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Section 5: Fire and Explosion Data (Continued)

Special hazards arising from the substance or mixture: Carbon oxides.

Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information: no data available

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

Environmental precautions: Do not let product enter drains.

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

Reference to other sections: For disposal see section 13.

Section 7: 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, including any incompatibilities:
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature 2 - 8 °C
Storage class (TRGS 510): Non Combustible Solids

Specific end uses:
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks andat the end of workday.

Personal protective equipment

Eye/face protection:

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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.

Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

Physical state	**: Solid**
Colour	**: White to yellow crystalline.**
Odour	**: Odourless.**
Odour threshold	**: No data available.**
pH	**: Not applicable.**
Melting point	**: 114 °C**
Auto ignition temperature	**: No data available.**
Boiling point	**: 138 °C**

Section 9: Physical and Chemical Properties (Continued)

Flammability (solid, gas) : **No data available.**
Upper/lower flammability or explosive limits: **No data available.**
Flash point [°C] : **No data available.**
Evaporation rate : **No data available.**
Vapour pressure : **No data available.**
Vapour density : **No data available.**
Relative density, : **No data available.**
Solubility in water : **100 g/l at 20 °C**
Viscosity : **No data available.**
Explosive properties : **No data available.**
Oxidising properties : **No data available.**
Decomposition temperature : **No data available.**
Autoignition temperature : **No data available.**
Molecular Weight : **146,10 g/mol**
Other safety information : **No data available**

Section 10: Stability and Reactivity Data

Reactivity: **No data available.**

Chemical stability: **Stable under recommended storage conditions.**

Possibility of hazardous reactions: **No data available.**

Conditions to avoid: **No data available.**

Incompatible materials: **Bases, Oxidizing agents, Reducing agents**

Hazardous decomposition products
Other decomposition products - no data available

Section 11: Toxicological Information

Information on toxicological effects
Acute toxicity: **No data available**

Section 11: Toxicological Information (Continued)

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

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.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information
RTECS: Not available To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12: Ecological Information

Toxicity: No data available.

Persistence - degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 12: Ecological Information (Continued)

Other adverse effects: **No data available.**

Section 13: Disposal Considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: **Dispose of as unused product.**

Section 14: Transport Information

Land transport (ADR-RID)

General information: **Not regulated.**

Sea transport (IMDG) [English only]

General information: **Not regulated.**

Air transport (ICAO-IATA) [English only]

General information: **Not regulated.**

Section 15: Other Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:
No data available

Chemical Safety Assessment: **For this product a chemical safety assessment was not carried out**

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available.

Disclaimer:

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