

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.1

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : α -Ketoglutarate Quantitation Kit

Product Number : MAK541

Brand : Sigma

REACH No. : This product is a mixture. REACH Registration Number see section 3.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company :

1.4 Emergency telephone

Emergency Phone # : +(44)-870-8200418 (CHEMTREC (GB))
+(353)-19014670 (CHEMTREC Ireland)
001-803-017-9114 (CHEMTREC India)

This is a summary SDS for a kit. For the full SDS for each of the components listed in section 16 please visit our website.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Respiratory sensitization (Category 1), H334

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Sigma- MAK541

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| | |
|--------------------------------|--|
| Hazard statement(s) | |
| H302 | Harmful if swallowed. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Precautionary statement(s) | |
| P261 | Avoid breathing mist or vapors. |
| P264 | Wash skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P284 | Wear respiratory protection. |
| P301 + P312 | IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |
| Supplemental Hazard Statements | none |

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word Danger

| | |
|---------------------|--|
| Hazard statement(s) | |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

| | |
|----------------------------|---|
| Precautionary statement(s) | |
| P261 | Avoid breathing mist or vapors. |
| P284 | Wear respiratory protection. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

| | |
|--------------------------------|------|
| Supplemental Hazard Statements | none |
|--------------------------------|------|

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

Refer to component SDS

SECTION 4: First aid measures

Refer to component SDS

SECTION 5: Firefighting measures

Refer to component SDS



SECTION 6: Accidental release measures

Refer to component SDS

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class

Storage class (TRGS 510): 10: Combustible liquids

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

Refer to component SDS

SECTION 9: Physical and chemical properties

Refer to component SDS

SECTION 10: Stability and reactivity

Refer to component SDS

SECTION 11: Toxicological information

Refer to component SDS

SECTION 12: Ecological information

Refer to component SDS

Sigma- MAK541

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SECTION 13: Disposal considerations

Refer to component SDS

SECTION 14: Transport information

14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Further information : No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Refer to component SDS

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Kit Components:

| | | | |
|-------------------------|-------|---------|---------------------|
| PEROXIDASE SUBSTRATE | Sigma | MAK541A | Acute Tox. 4; H302 |
| Enzyme Mix2 | Sigma | MAK541C | Resp. Sens. 1; H334 |
| Enzyme Mix1 | Sigma | MAK541B | |
| Assay Buffer | Sigma | MAK541D | |
| α-Ketoglutarate | Sigma | MAK541E | |

Sigma- MAK541

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Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture

| | |
|--------------|------|
| Acute Tox.4 | H302 |
| Resp. Sens.1 | H334 |

Classification procedure:

| |
|--------------------|
| Calculation method |
| Calculation method |



Further information


The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.


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Kit Components:

| PEROXIDASE SUBSTRATE | | | | | |
|----------------------|---|-------------|-----------------------|---|--------------------------|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541A |  | Warning | Harmful if swallowed. | Wash skin thoroughly after handling. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Dispose of contents/ container to an approved waste disposal plant. Do not eat, drink or smoke when using this product. | |

| Enzyme Mix2 | | | | | |
|--------------------|---|-------------|--|--|--------------------------|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541C |  | Danger | May cause allergy or asthma symptoms or breathing difficulties if inhaled. | Avoid breathing dust. Dispose of contents/ container to an approved waste disposal plant. Wear respiratory protection. | |

| Enzyme Mix1 | | | | | |
|--------------------|-----------|-------------|-------------------|--------------------------|---|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541B | | | | | No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required |



| Assay Buffer | | | | | |
|---------------------|-----------|-------------|-------------------|--------------------------|---|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541D | | | | | No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required |

| α-Ketoglutarate Standard | | | | | |
|---|-----------|-------------|-------------------|--------------------------|---|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541E | | | | | No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required |

| DMSO | | | | | |
|--------------------|-----------|-------------|-------------------|--------------------------|---|
| Product identifier | Pictogram | Signal Word | Hazard Statements | Precautionary Statements | Supplemental information |
| Sigma - MAK541F | | | | | No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required |

