

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 8.6

Revision Date 24.04.2025

Print Date 04.05.2025

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 : Alanine Metabolite Library

Product Number : ML0014

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

Uses advised against : For R&D use only. Not for pharmaceutical, household or other uses.

### 1.3

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### 1.4 Emergency telephone

Emergency Phone # : 000 800 1007 141 (CHEMTREC)

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

Corrosive to Metals, (Category 1)	H290: May be corrosive to metals.
Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Skin irritation, (Category 2)	H315: Causes skin irritation.
Serious eye damage, (Category 1)	H318: Causes serious eye damage.
Skin sensitization, (Category 1)	H317: May cause an allergic skin reaction.

## 2.2 Label elements

### Labelling according Regulation (EC) No 1272/2008

#### Pictogram

Signal Word	Danger
Hazard Statements	
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
Precautionary Statements	
P234	Keep only in original packaging.
P261	Avoid breathing dust.
P280	Wear protective gloves/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
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 and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### Reduced Labeling (<= 125 ml)

#### Pictogram

Signal Word	Danger
Hazard Statements	
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
Precautionary Statements	
P261	Avoid breathing dust.
P280	Wear protective gloves/ eye protection/ face protection.
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 and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

## 2.3 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.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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### **SECTION 3: Composition/information on ingredients**

Refer to component SDS

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### **SECTION 4: First aid measures**

Refer to component SDS

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### **SECTION 5: Firefighting measures**

Refer to component SDS

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### **SECTION 6: Accidental release measures**

Refer to component SDS

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### **SECTION 7: Handling and storage**

#### **7.1 Precautions for safe handling**

For precautions see section 2.2.

#### **7.2 Conditions for safe storage, including any incompatibilities**

##### **Storage conditions**

No metal containers.

Tightly closed. Dry.

##### **Storage class**

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

#### **7.3 Specific end use(s)**

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

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### **SECTION 8: Exposure controls/personal protection**

Refer to component SDS

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### **SECTION 9: Physical and chemical properties**

Refer to component SDS

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**SECTION 10: Stability and reactivity**

Refer to component SDS

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**SECTION 11: Toxicological information**

Refer to component SDS

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**SECTION 12: Ecological information**

Refer to component SDS

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**SECTION 13: Disposal considerations**

Refer to component SDS

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 3316

IMDG: 3316

IATA: 3316

**14.2 UN proper shipping name**

ADR/RID: CHEMICAL KIT

IMDG: CHEMICAL KIT

IATA: Chemical kit

**14.3 Transport hazard class(es)**

ADR/RID: 9

IMDG: 9

IATA: 9

**14.4 Packaging group**

ADR/RID: III

IMDG: III

IATA: III

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**14.6 Special precautions for user**

Tunnel restriction code : (E)

Further information : No data available

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable for product as supplied.

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**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

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### SECTION 16: Other information

#### Kit Components:

Glycine	Sigma	G7126	Eye Irrit. 2; Skin Sens. 1B; H317, H319
Sodium pyruvate	Sigma-Aldrich	P2256	
Biotin	Sigma-Aldrich	B4501	
Adenosine 5'-triphosphate disodium salt hydrate	Sigma	A2383	
Adenosine 5'-diphosphate sodium salt	Sigma	A2754	
L-Alanine	Sigma	A7627	
L-Glutamic acid	Sigma	G1251	
Pyridoxal 5'-phosphate hydrate	Sigma	P9255	
Glyoxylic acid monohydrate	Sigma	G10601	Met. Corr. 1; Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; H290, H315, H317, H318
$\alpha$ -Ketoglutaric acid	Sigma	K1750	Eye Dam. 1; H318
Oxaloacetic acid	Sigma	O4126	Eye Irrit. 2; H319
Sodium pyrophosphate tetrabasic	Aldrich	P8010	Acute Tox. 4; Eye Dam. 1; H302, H318
Adenosine 5'-monophosphate monohydrate	Sigma	A2252	

## 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

Met. Corr.1	H290
Acute Tox.4	H302
Skin Irrit.2	H315
Eye Dam.1	H318
Skin Sens.1	H317

### Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

## Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. 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](http://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:

<b>Glycine</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - G7126					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

<b>Sodium pyruvate</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma-Aldrich - P2256		Warning	May cause an allergic skin reaction. Causes serious eye irritation.	Avoid breathing dust. IF ON SKIN: Wash with plenty of water. Wash skin thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ eye protection/ face protection.	

<b>Biotin</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma-Aldrich					No hazard pictogram, no



- B4501					signal word, no hazard statement(s), no precautionary statement(s) required.
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**Adenosine 5'-triphosphate disodium salt hydrate**

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - A2383					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

**Adenosine 5'-diphosphate sodium salt**

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - A2754					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

**L-Alanine**

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - A7627					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

**L-Glutamic acid**

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - G1251					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

<b>Pyridoxal 5'-phosphate hydrate</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - P9255					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

<b>Glyoxylic acid monohydrate</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - G10601		Danger	May be corrosive to metals. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.	Keep only in original packaging. IF ON SKIN: Wash with plenty of water. Avoid breathing dust. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash skin thoroughly after handling. Wear protective gloves/ eye protection/ face protection.	

<b><math>\alpha</math>-Ketoglutaric acid</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - K1750		Danger	Causes serious eye damage.	Wear eye protection/ face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	

<b>Oxaloacetic acid</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - 04126		Warning	Causes serious eye irritation.	Wash skin thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wear eye protection/ face protection. If eye irritation persists: Get medical advice/ attention.	

<b>Sodium pyrophosphate tetrabasic</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Aldrich - P8010		Danger	Harmful if swallowed. Causes serious eye damage.	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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wear eye protection/ face protection.	

<b>Adenosine 5'-monophosphate monohydrate</b>					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - A2252					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

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