

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 7.28

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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 : Mass Spectrometry Metabolite Library of Standards

Product Number : MSMLS

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

CHEMIKART

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

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Corrosive to Metals (Category 1), H290

Acute toxicity, Oral (Category 1), H300

Acute toxicity, Inhalation (Category 1), H330

Acute toxicity, Dermal (Category 1), H310

Skin corrosion (Sub-category 1A), H314

Serious eye damage (Category 1), H318

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Germ cell mutagenicity (Category 1B), H340

Carcinogenicity (Category 1A), H350
 Reproductive toxicity (Category 1A), H360FD
 Effects on or via lactation, H362
 Specific target organ toxicity - single exposure (Category 1), Eyes, Central nervous system, Immune system, H370
 Specific target organ toxicity - single exposure (Category 2), H371
 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
 Specific target organ toxicity - repeated exposure (Category 1), H372
 Specific target organ toxicity - repeated exposure, Inhalation (Category 2), Respiratory system, H373
 Aspiration hazard (Category 1), H304
 Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410

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
Hazard statement(s)	
H225	Highly flammable liquid and vapor.
H290	May be corrosive to metals.
H300 + H310 + H330	Fatal if swallowed, in contact with skin or if inhaled.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.
H362	May cause harm to breast-fed children.
H370	Causes damage to organs (Eyes, Central nervous system, Immune system).
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P263	Avoid contact during pregnancy and while nursing.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable

P305 + P351 + P338 for breathing. Immediately call a POISON CENTER/ doctor.
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard information (EU)
EUH071 Corrosive to the respiratory tract.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word Danger

Hazard statement(s)

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H362 May cause harm to breast-fed children.

H370 Causes damage to organs.

H372 Causes damage to organs through prolonged or repeated exposure.

H304 May be fatal if swallowed and enters airways.

H314 Causes severe skin burns and eye damage.

H360FD May damage fertility. May damage the unborn child.

H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

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 information (EU)
EUH071 Corrosive to the respiratory tract.

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.

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

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. No metal containers.

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability

Recommended storage temperature
-20 °C

Storage class

Storage class (TRGS 510): 3: Flammable 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

SECTION 13: Disposal considerations

Refer to component SDS

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: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

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:**

Mass Spectrometry
Metabolite Library of
Standards (Plate 1)

Sigma

MSMLS-01

Flam. Liq. 3; Acute Tox. 1; Acute
Tox. 3; Acute Tox. 1; Skin Corr.
1C; Skin Corr. 1B; Eye Dam. 1;
Skin Sens. 1; Carc. 2; Repr. 1B;

Mass Spectrometry Metabolite Library of Standards (Plate 2)	Sigma	MSMLS-02	Repr. 2; STOT SE 3; STOT RE 2; Aquatic Chronic 2; H226, H301, H314, H335, H351, H361fd, H373, H411, EUH071 Flam. Liq. 3; Met. Corr. 1; Acute Tox. 2; Acute Tox. 1; Acute Tox. 2; Skin Corr. 1A; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; Muta. 2; STOT SE 1; STOT SE 2; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H226, H290, H300 + H310 + H330, H314, H317, H334, H335, H341, H370, H371, H373, H410, EUH071
Mass Spectrometry Metabolite Library of Standards (Plate 3)	Sigma	MSMLS-03	Flam. Liq. 2; Met. Corr. 1; Acute Tox. 3; Acute Tox. 2; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1; Skin Sens. 1; STOT SE 1; STOT SE 2; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H225, H290, H301 + H311, H314, H317, H330, H334, H335, H370, H371, H373, H410
Mass Spectrometry Metabolite Library of Standards (Plate 4)	Sigma	MSMLS-04	Flam. Liq. 3; Acute Tox. 3; Acute Tox. 1; Acute Tox. 2; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Muta. 1B; Carc. 1B; Repr. 1B; STOT SE 1; STOT SE 3; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H226, H301, H310 + H330, H314, H317, H335, H340, H350, H360FD, H370, H372, H410
Mass Spectrometry Metabolite Library of Standards (Plate 5)	Sigma	MSMLS-05	Flam. Liq. 2; Acute Tox. 2; Skin Corr. 1A; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 1B; Repr. 1A; STOT SE 3; STOT RE 1; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H225, H300 + H310 + H330, H314, H317, H335, H341, H350, H360, H372, H372, H373, H410
Mass Spectrometry Metabolite Library of Standards (Plate 6)	Sigma	MSMLS-06	Flam. Liq. 2; Met. Corr. 1; Acute Tox. 2; Acute Tox. 3; Acute Tox. 1; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Muta. 2; Carc. 2; Repr. 2; STOT SE 3; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H225, H290, H300 + H310, H314, H317, H331, H335, H341, H351, H361, H373, H410
Mass Spectrometry	Sigma	MSMLS-07	Acute Tox. 3; Acute Tox. 2;

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

Flam. Liq.2	H225
Met. Corr.1	H290
Acute Tox.1	H300
Acute Tox.1	H330
Acute Tox.1	H310
Skin Corr.1A	H314

Classification procedure:

Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Eye Dam.1	H318	Calculation method
Resp. Sens.1	H334	Calculation method
Skin Sens.1	H317	Calculation method
Muta.1B	H340	Calculation method
Carc.1A	H350	Calculation method
Repr.1A	H360FD	Calculation method
Lact.	H362	Calculation method
STOT SE1	H370	Calculation method
STOT SE2	H371	Calculation method
STOT SE3	H335	Calculation method
STOT RE1	H372	Calculation method
STOT RE2	H373	Calculation method
Asp. Tox.1	H304	Calculation method
Aquatic Acute1	H400	Calculation method
Aquatic Chronic1	H410	Calculation method

Further information

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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:

Mass Spectrometry Metabolite Library of Standards (Plate 1)					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-01		Danger	Flammable liquid and vapor. Toxic if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Suspected of causing cancer. Suspected of damaging fertility. Suspected of damaging the unborn child. May cause damage to organs (Kidney, Liver, Blood) through prolonged or repeated exposure if swallowed. Toxic to aquatic life with long lasting effects.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	Corrosive to the respiratory tract.

Mass Spectrometry Metabolite Library of Standards (Plate 2)					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-02		Danger	Flammable liquid and vapor. May be corrosive to metals. Fatal if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. Causes damage to organs (Eyes, Central nervous system). May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	Corrosive to the respiratory tract.

Mass Spectrometry Metabolite Library of Standards (Plate 3)					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-03		Danger	Highly flammable liquid and vapor. May be corrosive to metals. Toxic if swallowed or in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Causes damage to organs (Eyes, Central nervous system). May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	

Mass Spectrometry Metabolite Library of Standards (Plate 4)					
Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-04		Danger	Flammable liquid and vapor.	Keep away from heat, hot	

			Toxic if swallowed. Fatal in contact with skin or if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. May cause genetic defects. May cause cancer. May damage fertility. May damage the unborn child. Causes damage to organs (Immune system). Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.	surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	
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Mass Spectrometry Metabolite Library of Standards (Plate 5)

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-05		Danger	Highly flammable liquid and vapor. Fatal if swallowed, in contact with skin or if inhaled. Causes severe skin burns and eye damage.	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off	

			May cause an allergic skin reaction. May cause respiratory irritation. Suspected of causing genetic defects. May cause cancer. May damage fertility or the unborn child. Causes damage to organs (Blood) through prolonged or repeated exposure. Causes damage to organs (Lungs) through prolonged or repeated exposure if inhaled. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.	immediately all contaminated clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	
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Mass Spectrometry Metabolite Library of Standards (Plate 6)

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-06		Danger	Highly flammable liquid and vapor. May be corrosive to metals. Fatal if swallowed or in contact with skin. Causes severe skin burns and	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated	

			eye damage. May cause an allergic skin reaction. Toxic if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled. Very toxic to aquatic life with long lasting effects.	clothing. Rinse skin with water. Avoid release to the environment. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Wear protective gloves/ protective clothing/ 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.	
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Mass Spectrometry Metabolite Library of Standards (Plate 7)

Product identifier	Pictogram	Signal Word	Hazard Statements	Precautionary Statements	Supplemental information
Sigma - MSMLS-07		Danger	Toxic if swallowed or in contact with skin. May be fatal if swallowed and enters airways. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Fatal if inhaled. May cause respiratory irritation. Suspected of causing genetic	Avoid contact during pregnancy and while nursing. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse	

			defects. May cause cancer. May damage fertility. May damage the unborn child. May cause harm to breast-fed children. Causes damage to organs through prolonged or repeated exposure if swallowed. Very toxic to aquatic life with long lasting effects.	skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
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CHEMIKART