

# SAFETY DATA SHEET

Version 6.7  
Revision Date 08/07/2024  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : F.A.M.E. Mix  
Product Number : CRM18918  
Brand : Supelco

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

Identified uses : Laboratory chemicals, Synthesis of substances  
Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

### 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATES  
Telephone : +1 314 771-5765  
Fax : +1 800 325-5052

### 1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Short-term (acute) aquatic hazard (Category 1), H400  
Long-term (chronic) aquatic hazard (Category 3), H412

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Warning

Hazard Statements

H400

Very toxic to aquatic life.

H412

Harmful to aquatic life with long lasting effects.

Precautionary Statements

P273

Avoid release to the environment.

P391

Collect spillage.

P501

Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Component	Classification	Concentration
<b>methyl laurate</b>		
CAS-No. 111-82-0 EC-No. 203-911-3	Aquatic Acute 1; Aquatic Chronic 2; H400, H411 M-Factor - Aquatic Acute: 1	$\geq 5 - < 10$ %
<b>methyl decanoate</b>		
CAS-No. 110-42-9 EC-No. 203-766-6	Aquatic Acute 1; Aquatic Chronic 2; H400, H411 M-Factor - Aquatic Acute: 10	$\geq 5 - < 10$ %
<b>methyl stearate</b>		
CAS-No. 112-61-8 EC-No. 203-990-4		$\geq 5 - < 10$ %

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

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

**In case of eye contact**

After eye contact: rinse out with plenty of water. Remove contact lenses.

**If swallowed**

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

**4.2 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

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

**Unsuitable extinguishing media**

For this substance/mixture no limitations of extinguishing agents are given.

**5.2 Special hazards arising from the substance or mixture**

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

**5.3 Advice for firefighters**

In the event of fire, wear self-contained breathing apparatus.

**5.4 Further information**

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemisorb® ).

Dispose of properly. Clean up affected area.

**6.4 Reference to other sections**

For disposal see section 13.

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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**

Tightly closed.

**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

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**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
methyl stearate	112-61-8	TWA	10 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Not classifiable as a human carcinogen		
		TWA	3 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Not classifiable as a human carcinogen		

**8.2 Exposure controls****Appropriate engineering controls**

Change contaminated clothing. Wash hands after working with substance.

**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). Safety glasses

**Skin protection**

not required

**Respiratory protection**

Not required; except in case of aerosol formation.

**Control of environmental exposure**

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |   |                                  |
|---|----------------------------------|
| a) Appearance                                   | Form: liquid<br>Color: colorless |
| b) Odor   | No data available                |
| c) Odor 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) Vapor pressure                               | No data available                |
| l) Vapor density                                | No data available                |
| m) Density                                      | No data available                |
| Relative density                                | No data available                |
| n) Water solubility                             | No data available                |
| o) Partition coefficient: n-octanol/water       | No data available                |
| p) Autoignition temperature                     | No data available                |
| q) Decomposition temperature                    | No data available                |
| r) Viscosity                                    | No data available                |
| s) Explosive properties                         | Not classified as explosive.     |
| t) Oxidizing properties                         | none                             |

### 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

No data available

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### Acute toxicity

Acute toxicity estimate Oral - > 5,000 mg/kg  
(Calculation method)

Acute toxicity estimate Inhalation - 4 h - 65.63 mg/l - dust/mist(Calculation method)

Dermal: No data available

#### 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 ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels 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 on OSHA's list of regulated carcinogens.

#### Reproductive toxicity

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

**Components****methyl laurate****Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l - aerosol

(OECD Test Guideline 436)

Dermal: No data available

**Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Human lymphocytes

Result: negative

Test Type: Mutagenicity (mammal cell test):

Test system: mouse lymphoma cells

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**methyl decanoate****Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(EC Directive 92/69/EEC B.1 Acute Toxicity (Oral))

LC50 Inhalation - Rat - male and female - > 5 mg/l - aerosol

(OECD Test Guideline 436)

Dermal: No data available

**Skin corrosion/irritation**

Remarks: No data available

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

(Regulation (EC) No. 440/2008, Annex, B.5)

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: Not a skin sensitizer.

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: Chromosome aberration test in vitro

Test system: lymphocyte

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available



## **methyl stearate**

### **Acute toxicity**

LD50 Oral - Rat - male and female - > 2,000 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5 mg/l - aerosol

(OECD Test Guideline 436)

Dermal: No data available

### **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

### **Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation - 24 h

(OECD Test Guideline 405)

### **Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: negative

### **Carcinogenicity**

No data available

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

No data available

### **Specific target organ toxicity - repeated exposure**

### **Aspiration hazard**

No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Mixture

No data available

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

No data available

#### Components

##### methyl laurate

Toxicity to fish flow-through test LC50 - *Oryzias latipes* (Orange-red killifish) - > 0.52 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates flow-through test EC50 - *Daphnia magna* (Water flea) - 0.255 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (green algae) - 0.324 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) flow-through test NOEC - *Daphnia magna* (Water flea) - 0.081 mg/l - 21 d (OECD Test Guideline 211)

##### methyl decanoate

Toxicity to fish static test LC50 - *Leuciscus idus* (Golden orfe) - 170 mg/l - 48 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - *Daphnia magna* (Water flea) - 1.1 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 0.055 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	flow-through test NOEC - Daphnia magna (Water flea) - 0.081 mg/l - 21 d (OECD Test Guideline 211)

#### **methyl stearate**

Toxicity to daphnia and other aquatic invertebrates	semi-static test EC50 - Daphnia magna (Water flea) - > 0.02 mg/l - 48 h (OECD Test Guideline 202) Remarks: The value is given in analogy to the following substances: methyl myristate
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata - > 0.023 mg/l - 72 h (OECD Test Guideline 201)

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## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

#### **Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## **SECTION 14: Transport information**

#### **DOT (US)**

Not dangerous goods

#### **IMDG**

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(methyl decanoate, methyl laurate)

Marine pollutant : yes

Marine pollutant : no

#### **IATA**

UN number: 3082 Class: 9

Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (methyl decanoate, methyl laurate)

**Further information**

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids. Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

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**SECTION 15: Regulatory information**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute Health Hazard

**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.

**US State Regulations**

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

methyl palmitate	112-39-0
Methyl docosanoate	929-77-1
methyl octanoate	111-11-5
methyl laurate	111-82-0
Methyl icosanoate	1120-28-1
Methyl tetracosanoate	2442-49-1
methyl myristate	124-10-7
methyl decanoate	110-42-9
methyl stearate	112-61-8
methyl erucate	1120-34-9
Methyl (9Z,12Z,15Z)-9,12,15-octadecatrienoate	301-00-8
methyl oleate	112-62-9
Methyl palmitoleate	1120-25-8
Linoleic acid methyl ester, cis/trans-isomers	Not Assigned

### Maine Chemicals of High Concern

Product does not contain any listed chemicals

### Vermont Chemicals of High Concern

Product does not contain any listed chemicals

### Washington Chemicals of High Concern

Product does not contain any listed chemicals

### New Jersey Right To Know

methyl palmitate	112-39-0
Methyl docosanoate	929-77-1
methyl octanoate	111-11-5
methyl laurate	111-82-0
Methyl icosanoate	1120-28-1
Methyl tetracosanoate	2442-49-1
methyl myristate	124-10-7
methyl decanoate	110-42-9
methyl stearate	112-61-8

### The ingredients of this product are reported in the following inventories:

TSCA : Product contains substance(s) not listed on TSCA inventory.

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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## SECTION 16: Other information

### 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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