

# SDS: Soybean oil fatty acid methyl esters

## 1. Identification

**Name** Soybean oil fatty acid methyl esters

**CAS Number** 67784-80-9

### Recommendation for the chemical and restrictions on use

**Applications** Research and development/Performance chemical/ Industrial Solvent.

**Restrictions** No specific uses advised against are identified.

### Supplier's Details

#### **InKemia Green Chemicals, Inc.**

1213 West Loop North Suite 140 , Houston, TX 77005

+1 (713) 909-7717

web@inkemiagreenchemicals.com

### Emergency contact number

#### **InKemia Green Chemicals, Inc.**

Tel: +1 (713) 909-7717

For emergency calls only.

## 2. Hazards

### Classification of the substance or mixture

**Classification** Causes mild skin irritation (Category 3), H316.  
Causes eye irritation (Category 2B), H320.

### Label elements

#### **Pictogram**

None.

#### **Signal word**

## Warning

### **Hazard Statements**

H316 - Causes mild skin irritation.

H320 - Causes eye irritation

### **Precautionary Statements**

P264 - Wash skin thoroughly after handling.

P271 - Use only outdoors or in a well-ventilated area.

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 - If eye irritation persist: Get medical advice/attention. P362 - Take off contaminated clothing.

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403 + P235 - Store in a well-ventilated place. Keep cool.

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P501 - Dispose of contents/container to an approved waste disposal plant

## Other Hazards

None.

## 3 - Composition/information on ingredients

### Substances

**Chemical Name** Soybean oil fatty acid methyl esters

**Synonyms** Methyl soyate; Fatty acid methyl esters derived from soybean oil.

**CAS Number** 67784-80-9

**Molecular Formula** C18.7H34.6O2

**Molecular Weight (g/mol)** 286.6-292.4

### Hazardous components

Component	Classification	Concentration
Soybean oil fatty acid methyl esters.	Skin Irrit. 3; Eye Irrit. 2B; H316, H320.	<=100 wt.%

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

**Impurities and stabilizing additives** Glycerol and glycerides (<0.3 wt.%)

**Mixtures** This product is a mixture of fatty acid methyl esters with an average composition of:

Palmitic acid methyl ester 9 wt.%  
Palmitoleic acid methyl ester 2 wt.%  
Stearic acid methyl ester 4 wt.%  
Oleic acid methyl ester 22 wt.%  
Linoleic methyl ester 50 wt.%  
Linolenic acid methyl esters 9 wt.%  
Other components 4 wt%

## 4 - First-aid measures

### Description of first aid measures

**General information** Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

**Inhalation** Remove from exposure, moving to fresh air. Artificial respiration and oxygen are necessary if not breathing. Consult a physician.

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<b>Ingestion</b>	Wash out mouth with water if the person is conscious. Do not induce vomiting. Consult a physician.
<b>Skin contact</b>	Immediately wash skin with soap and copious amounts of water.
<b>Eye contact</b>	Immediately irrigate with copious amounts of water for 15 minutes. Consult a physician.
<b>Protection of first-aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

## **Most important symptoms and effects, both acute and delayed**

<b>General information</b>	The severity of the symptoms described might vary depending on the concentration and length of exposure.
<b>Inhalation</b>	None known.
<b>Ingestion</b>	Slightly dangerous.
<b>Skin contact</b>	May cause irritation.
<b>Eye contact</b>	May cause irritation.

## **Indication of immediate medical attention and special treatment need**

<b>Notes for the doctor</b>	Treat symptomatically.
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## **5 – Fire-fighting measure**

### **Extinguishing media**

**Suitable extinguisher media** Dry chemical, carbon dioxide or water fog.

**Unsuitable extinguisher media** Do not apply a direct stream of water onto hot, burning liquids.

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

**Specific hazards** Oils in contact with porous materials, including rags, trash, vessel and piping insulation, when stored in confined space may spontaneously combust. Rags soaked with any solvent present a fire hazard and should always be stored in UL listed or Factory Mutual approved covered containers.

**Hazardous combustion products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

### **Advice for firefighters**

#### **Protective actions during firefighting**

Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them

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from the fire area if it can be done without risk. Avoid discharge to the aquatic environment. Control runoff water by containing and keeping it out of sewers and watercourses. If the risk of water pollution occurs, notify appropriate authorities.

## Special protective equipment for firefighting

Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-Approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Do not apply a direct stream of water onto hot, burning liquids; this may cause frothing or violent steam generation.

## 6 – Accidental release measures

### Personal precautions, protective equipment, and emergency procedures

#### Personal Precautions

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into the spilled material.

#### Environmental precautions

#### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Methods and materials for containment and cleanup

#### Methods for cleaning

Contain and remove the spillage, soaking up the residue with non-flammable absorbent. Place in an adequate container for immediate disposal. Eliminate sources of ignition. For waste disposal see Section 13.

#### Reference to other sections

For personal protection see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For disposal see section 13.

## 7 – Handling and storage

### Precautions for safe handling

#### Usage precautions

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Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink, and animal feeding stuff. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers. For precautions see Section 2.

## Advice on general occupational hygiene

Promptly wash if in contact with skin. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse.

## Conditions for safe storage, including any Incompatibilities

### Storage precautions

Store away from incompatible materials (see Section 10). Keep only in the original container. Keep container tightly closed, in a cool, well-ventilated place. Keep containers upright. Protect containers from damage. Keep in a fresh and dry place, avoiding direct sunlight. Keep container tightly sealed, in a fireproof place.

### Storage class

Miscellaneous hazardous material storage. Preferably in a well-ventilated solvent cabinet.

### Specific end uses

The identified uses for this product are in Section 1.

## 8 – Exposure controls/personal protection

### Control parameters

### Occupational exposure limits:

Mixture containing no substances with occupational exposure limit values.

### Protective equipment



### Engineering control measures

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

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## Eye/Face protection

Wear safety glasses with side-shields.

## Hand protection

Avoid skin contact. Wear protective clothes and solvent resistant gloves (nitrile).

## Other skin and body protection

Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

## Hygiene measures

Wash after use and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product.

## Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with a multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## Environmental exposure

Avoid discharging to drains.

## 9 – Physical and chemical properties

<b>Appearance</b>	Light yellow liquid.	<b>Water miscibility @ 20 °C, g/L</b>	Low miscibility.
<b>Odor threshold</b>	No data available.	<b>Solubility (other)</b>	Miscible with hydrocarbons, ethers and acetone.
<b>Melting point/Freezing point, °C</b>	-15 (Freeze point) to 1.6 (Completion of melt temperature)	<b>Moderately miscible in alcohols.</b>	Moderately miscible in alcohols.
<b>Boiling point, °C</b>	150-390 (96 wt.% of the mixture distilled, computational estimation)	<b>Partition coefficient, log Pow @ 25 °C</b>	6.82 (Estimation as linoleic acid methyl ester, EPI Suite)
<b>Initial boiling point and range, °C</b>	150-390	<b>Autoignition temperature, °C</b>	260
<b>Flash point</b>	130	<b>Decomposition temperature, °C</b>	No data available.
<b>Evaporation rate</b>	No data available.	<b>Dynamic viscosity @</b>	3.5 @ 40 °C
<b>Upper / lower</b>	No data available.		

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<b>flammability or/and explosive limits</b>	25 °C, cP
<b>Vapor pressure @ 20 °C, kPa</b>	0.06 @ 38 °C
<b>Vapor density (air=1)</b>	No data available.
<b>Relative density @ 25 °C, g/cm³</b>	0.880

## 10 – Stability and reactivity

<b>Reactivity</b>	Sensitivity to light. Air sensitive.
<b>Chemical stability</b>	Stable under normal storage conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization do not occur under normal conditions.
<b>Incompatible materials</b>	Strong oxidizing agents. Strong bases. Strong acids. Exposure to air. Exposure to light.
<b>Conditions to avoid</b>	Excess heat. Ignition sources.
<b>Hazardous decomposition products</b>	No data available.

## 11 – Toxicological information

### Acute toxicity - oral

**Acute toxicity - oral (LD50,mg/kg)** >5,000

**Species** Rat

**Notes (oral LD50)** Based on available data the classification criteria are not met.

### Acute toxicity - dermal

**Acute toxicity - dermal (LD50,mg/kg)** >2,000

**Species** Rabbit

**Notes (Dermal LD50)** Based on available data the classification criteria are not met.

### Acute toxicity - inhalation

**Acute toxicity - inhalation (LC50,dust/mist mg/l)** No data available.

**Notes (Inhalation LD50)** Based on available data the classification criteria are not met.

### Skin corrosion/irritation

**Result** May cause mild skin irritation.

### Serious eye damage/irritation

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<b>Result</b>	May cause mild eye irritation.
<b><u>Respiratory sensitization</u></b>	
<b>Result</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitization</u></b>	
<b>Result</b>	May cause an allergic skin reaction.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity – in vitro</b>	Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>IARC</b>	This product does not contain 0.1% or more of the known or potential carcinogens listed in IARC.
<b>ACGIH</b>	This product does not contain 0.1% or more of the known or potential carcinogens listed in IACGIH.
<b>NTP</b>	This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP.
<b>OSHA</b>	This product does not contain 0.1% or more of the known or potential carcinogens listed in OSHA.
<b><u>Reproductive toxicity</u></b>	
<b>Fertility</b>	Based on available data the classification criteria are not met.
<b>Development</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity</u></b>	
<b>STOT-single exposure</b>	No data available
<b>STOT-repeated exposure</b>	No data available
<b><u>Additional information</u></b>	
<b>General information</b>	This product is not classified as hazardous.
<b>Inhalation</b>	Vapors or mists may irritate: mucous membranes. May cause: dizziness. nausea.
<b>Ingestion</b>	Slightly dangerous.
<b>Skin contact</b>	Mild skin irritant.
<b>Eye contact</b>	Mild eye irritant.
<b>Route of entry</b>	Ingestion, Inhalation, skin and/or eye contact
<b>Target organs</b>	Not specific target organ known.

## 12 – Ecological information

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## Toxicity

**Ecotoxicity** Not regarded as hazardous, however large or frequent spills may have dangerous effects on the environment. Do not empty into drains.

### *Acute toxicity*

**Toxicity to fish** LC50 (96h) >100 mg/L (Fathead minnow)

**Aquatic invertebrates** EC50 (48h) >100 mg/L (Daphnia magna)

**Aquatic plants** No data available.

### *Chronic toxicity*

**Toxicity to fish** No data available.

**Aquatic invertebrates** No data available.

**Aquatic plants** No data available.

## Persistency and biodegradability

**Persistency and biodegradability** Expected to biodegrade under both aerobic and anaerobic conditions.

Result: - Readily biodegradable. (EPI Suite estimation).

**Biodegradation** Insoluble in water. It may persist in the environment.

**Biological oxygen demand(mg/g)** No data available.

**Chemical oxygen demand(mg/g)** No data available.

**BOD/COD ratio** No data available.

**Bioaccumulative potential** Unlikely to bioaccumulate (BCF<500).

**Mobility in soil** Is not likely mobile due its low water solubility.

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**Results of PBT and vPvB** No data available.

**Other adverse effects** No data available.

## 13 – Disposal considerations

### Waste treatment methods

#### **General information**

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of safely. When handling waste, the safety precautions applying to the handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues.

#### **Disposal methods**

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration and landfill should only be considered when recycling is not feasible.

## 14 – Transport information

**DOT (US)** Not regulated by the DOT.

**IMDG** Not regulated.

**IATA** Not regulated.

**Transport in bulk according to** Annex II of MARPOL 73/78, and the IBC Code

Not applicable.

## 15 – Regulatory information

### US Federal Regulations and state regulations

Components of the product are listed in the quoted regulations. For details, please refer to the regulations directly. This list is not exhaustive; please check for other applicable regulations.

**This product has been classified by hazard criteria of the Controlled Products Regulations, and the SDS contains all the information required by the Controlled Products Regulations.**

#### US Federal Regulations

##### **SARA 302 Section 302 (Specific toxic chemical listings)**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### **SARA Section 311/312 (Specific toxic chemical listings)**

Acute Health Hazard.

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## SARA Section 313 (Specific toxic chemical listings)

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.

## RCRA (hazardous waste code)

None of the ingredients are listed.

## TSCA (Toxic Substances Control Act)

CAS: 67784-80-9 is listed on the TSCA inventory.

## CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

None of the ingredients are listed.

## US State Regulations

### Proposition 65 (California)

Methanol: may be present in trace amounts.

### Chemicals are known to cause cancer

None of the chemicals in this product are listed.

### Chemicals are known to cause reproductive toxicity for females

None of the chemicals in this product are listed.

### Chemicals are known to cause reproductive toxicity for males

None of the chemicals in this product are listed.

### Massachusetts Right to Know Components

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

### Pennsylvania Right to Know Components

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

### New Jersey Right to Know Components

No components are subject to the New Jersey Right to Know Act.

## Canada

### Canadian Domestic Substances List (DSL)

CAS: 67784-80-9 is listed on Canada's DSL List.

### Canadian NPRI Ingredient Disclosure list (limit 0.1%)

The substance is not specified on any list. There is no control measure imposed to this substance.

### Canadian NPRI Ingredient Disclosure list (limit 1%)

The substance is not specified on any list. There is no control measure imposed to this substance.

## 16 – Other information

### Full text of H-Statements referred to under sections 2 and 3

H316 Causes mild skin irritation.

H320 Causes eye irritation.

Skin Irrit. Skin Irritant.

Eye Irrit. Eye Irritant.

### GHS Column Model 2017 Classification

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<b>Acute health hazards (single exp)</b>	Low
<b>Chronic health hazards (repeated exp.)</b>	Negligible
<b>Environmental hazards</b>	Negligible
<b>Physical-chemical hazards</b>	Negligible

### **Further Information**

The information above is believed to be accurate and represents the best information available. However, we make no warranty of merchantability or any other warranty, express or implied, on such information and we assume no liability resulting from its use. Users should make their investigations to determine the suitability of the information for their purposes. In no event shall the InKemia Green Chemicals, Inc. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages arising, even if the InKemia Green Chemicals, Inc. has been advised of the possibility of such damages.

**Issued by** LHD **Ver. 3.0 Rev. 31-10-2017**  
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