Section 1 – Identification

Product identifier: Methyl Esters

Other means of identification

Synonyms: Methyl soyate, soy methyl esters (SME), rapeseed methyl esters (RME), canola methyl esters (CME), corn oil methyl esters, methyl tallowate, fatty acid methyl esters, fatty acid alkyl esters, FAME, methyl esters, methyl ester.

Recommended use: Fuel, solvent, cleaning agent, heating oil, blend stock

Restrictions on use: Not intended for direct human consumption

Supplier information: REG Marketing & Logistics Group, LLC
416 S. Bell Ave
Ames, IA 50010
(888) 734-8686

Emergency phone number: For Hazardous Materials [or Dangerous Goods] Incident, Spill, Leak, Fire, Exposure, or Accident call CHEMTREC Day or Night: Domestic: 1-800-424-9300 International: +1 703-741-5970

Section 2 – Hazard(s) Identification

Classification (in accordance with 29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Hazard Category</th>
<th>Route of Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Irritation</td>
<td>Category 2 (irritation)</td>
<td>Absorption</td>
</tr>
<tr>
<td>Eye Irritation</td>
<td>Category 2B (mildly irritating)</td>
<td>Absorption</td>
</tr>
</tbody>
</table>

Signal word: WARNING

Pictograms

Hazard Statements: H315 Causes skin irritation
H320 Causes eye irritation

Precautionary statements

Prevention: Wash hands thoroughly after handling. Wear protective gloves.

Response: If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: No precautionary statement.

Disposal: No precautionary statement.
Safety Data Sheet (SDS)

Hazards not otherwise specified  None identified

Section 3 – Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Common Name &amp; Synonyms</th>
<th>CAS number</th>
<th>% of product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty acids, C14-18 and C16-18-unsatd., Me esters</td>
<td>Methyl Esters</td>
<td>67762-26-9</td>
<td>100%</td>
</tr>
</tbody>
</table>

Section 4 – First-Aid Measures

First-aid measures for exposure

- **Inhalation**: Move to fresh air
- **Skin**: Wash affected skin with soap and water. Take off contaminated clothing and wash it before reuse.
- **Eyes**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- **Ingestion**: Rinse mouth out with water. If feeling unwell, seek medical attention.

Most important symptoms / effects

- **Acute**: Causes skin and eye irritation.
- **Delayed / Chronic**: No information available

Indication of immediate medical attention

Treat symptomatically and supportively.

Special treatment needed, if necessary

No special treatment identified.

Section 5 – Fire-Fighting Measures

- **Suitable extinguishing media**: Water mist, firefighting foam, dry chemical, carbon dioxide, or clean extinguishing agents (such as Halon or Halotron)
- **Unsuitable extinguishing media**: Do not use a solid water stream, as it may scatter and spread the fire
- **Specific hazards arising from the chemical**: May burn if heated, but does not readily ignite.
  Materials saturated with this product, such as oily rags, used oil dri, soaked insulation pads, etc., may spontaneously combust due to product decomposition in the presence of oxygen. Place all such materials into appropriate oily waste containers (such as metal cans with metal lids or oily waste dumpsters with lids), and dispose of according to local, state, and federal regulations.
- **Hazardous combustion products include**: Carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons
Incipient stage fires may be controlled with a portable fire extinguisher. For fires beyond the incipient stage, evacuate all unnecessary personnel. Emergency responders in the immediate area should wear standard firefighting protective equipment, including self-contained breathing apparatus (SCBA) and full bunker gear. In case of external fires in proximity to storage containers, use water spray to keep containers cool, if it can be done safely. Prevent runoff from entering streams, sewers, storm drains, or drinking water supply.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment, and emergency procedures
Keep all sources of ignition away from spill. Wear protective garments, impervious oil resistant boots, protective chemical-resistant gloves, and safety glasses. If product has been heated, wear appropriate thermal and chemical protective equipment. If splash is a risk, wear splash resistant goggles and face shield. Shut off source of spill, if safe to do so. Contain spill to the smallest area possible. Isolate immediate hazard area and remove all nonessential personnel. Prevent spilled product from entering streams, sewers, storm drains, unauthorized treatment drainage systems, and natural waterways. Place dikes far ahead of the spill for later recovery and disposal. Immediate cleanup of any spill is recommended. If material spills into or upon any navigable waters and causes a film or sheen on the surface of the water, immediately notify the National Response Center at 1-800-424-8802.

Methods for containment and clean-up
Small spill / incidental release
Small spills can be cleaned up with a properly rated vacuum system, absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

Large spill / release
A spill remediation contractor with oil booms and skimmers may be needed for larger spills or spills that come into contact with a waterway or sensitive wetland. Recover as much product as possible by pumping it into totes or similar intermediate containers. Remove any remaining product with a properly rated vacuum system, absorbent inert media (oil dri, sand, or earth), or absorbent pads. Use soapy water or degreaser to remove oily residue from the affected area, then rinse area with water. Place saturated materials in an appropriate oily waste container (metal can with a metal lid or an enclosed oily waste dumpster), and dispose of according to local, state, and federal regulations.

Other information
Materials saturated with this product, such as oily rags, used oil dri, soaked insulation pads, etc., may spontaneously combust due to product decomposition in the presence of oxygen. Place all such materials into appropriate oily waste containers (such as metal cans with metal lids or oily waste dumpsters with lids), and dispose of according to local, state, and federal regulations.

Section 7 – Handling and Storage

Precautions for safe handling
When transferring product, use pipes, hoses, and tanks that are electrically bonded and grounded to prevent the accumulation of static electricity.

Conditions for safe storage, including incompatibilities
Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases. Store the product in a cool dry place, in a tightly closed container. Storage tanks should have an appropriate ventilation and pressure relief system.
Section 8 – Exposure Controls / Personal Protection

Precautions for safe handling
When transferring product, use pipes, hoses, and tanks that are electrically bonded and grounded to prevent the accumulation of static electricity.

Component exposure limits
At this time, the constituents have no known exposure limits.

Appropriate engineering controls
Keep product enclosed in primary containment (hoses, pipes, tanks, etc.) to avoid contact with skin. Handle in accordance with good industrial hygiene and safety practices.

Individual Protection Measures

Personal protective equipment

Eyes / face
Wear safety glasses. If splash potential exists, use splash resistant goggles and a face shield.

Skin
Wear disposable nitrile or other similar chemical-resistant gloves for incidental contact. For more substantial contact, wear thicker nitrile or other similar chemical-resistant gloves. Wear protective garments, such as a chemical apron, chemical resistant coveralls, or chemical resistant coat and pants, along with impervious oil-resistant boots. Remove soaked protective equipment, decontaminate with soapy water, and rinse thoroughly before reuse. Note: product will cause natural rubbers to degrade at a very rapid rate. Such protective equipment will need to be carefully inspected after decontamination to see if it is still in serviceable condition. Any defective or worn out equipment should be immediately discarded.

Respiratory
No exposure limits are available, but appropriate organic vapor or supplied air respiratory protection may be worn if irritation or discomfort is experienced. Respiratory protection must be provided and used in accordance with all local, state, and federal regulations.

Section 9 – Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance - Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance - Color</td>
<td>Water white to pale yellow to brown if undyed</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild oily or animal fat odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting/Freezing Point</td>
<td>1°C to 20°C / 30°F to 68°F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>&gt;280°C / 536°F (at 1 atm)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;93°C / &gt;200°F (ASTM D93)</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid/gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>LFL</td>
<td>No information available</td>
</tr>
<tr>
<td>UFL</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>0.87-0.89 @ 25°C</td>
</tr>
<tr>
<td>VOC</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Solubility (other)</td>
<td>No information available</td>
</tr>
<tr>
<td>Auto Ignition Temp.</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity @ 40°C</td>
<td>3.8-5.0 cSt</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Section 10 – Stability and Reactivity

Reactivity
When handled and stored appropriately, no dangerous reactions are known

Chemical stability
Stable in closed containers at room temperature under normal storage and handling conditions

Possibility of hazardous reactions
When handled and stored appropriately, no dangerous reactions are known

See Sections 5 and 6 regarding spontaneous combustion of product-saturated absorbent materials.

Conditions to avoid
Ignition sources, accumulation of static electricity, heating product to its flash point, or allowing the product to cool below its melting point (otherwise it may solidify and not be transferable until it is reheated).

Incompatible materials
Keep away from strong oxidizing agents, strong reducing agents, strong acids, and strong bases.

Hazardous decomposition products
Carbon oxides, hydrogen sulfide, nitrogen oxides, and hydrocarbons

Section 11 – Toxicological Information

Likely routes of exposure
Absorption, ingestion, and inhalation

Symptoms

Inhalation
Coughing or irritation

Ingestion
Nausea, vomiting, or feeling unwell

Skin contact
Redness or irritation

Eye contact
Redness or irritation and tearing

Acute toxicity

Oral
LD50 >17,500mg/kg (rat) estimated

Dermal
LC50 >2000mg/kg (rat)

Inhalation
No information available

Skin corrosion / irritation
(rat) after 24 hr exposure, some irritation which subsided within 12 – 14 days
(human) after 24 hr exposure, some minor irritation (less than that of a 4% soap & water solution)

Serious eye damage / eye irritation
Industrial experience has shown that product in the eyes can cause redness and irritation which subsides within 7 days.

Sensitization (Respiratory or Skin)
No information available

Germ cell mutagenicity
No information available

Carcinogenicity
Not listed as a carcinogen by IARC, NTP, or OSHA

Component carcinogenicity
No information available
Reproductive / developmental toxicity  No information available

Specific target organ toxicity
  Single exposure  No information available
  Repeated exposure  No information available

Aspiration hazard  No information available

### Section 12 – Ecological Information

**Acute ecotoxicity - short-term exposure**

- **Fish**
  - 48hr LC50 (rainbow trout) 2.8-4.6 ug/L
  - 96hr LC50 (bluegill) >1000mg/L

- **Invertebrates**
  - LC-50 (Daphnia Manga) 23 ppm

**Long Term Exposure (Fish & algae)**

- NOEL >100mg/L (fish, invertebrate, and algae)

**Persistence and degradability**

- Product is biodegradable in aerobic conditions (90% biodegraded within 23 days)

**Bioaccumulative potential**

- Accumulation in organisms is not to be expected

**Mobility in soil**

- No information available

**Other adverse effects**

- See section 5 & 6 regarding spontaneous combustion of materials that are soaked in this product

### Section 13 – Disposal Considerations

**Disposal (waste / unwanted product)**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate local, state, regional, or federal regulations for additional requirements.

**Disposal (containers with residue)**

Dispose of all containers with residue according to local, state, regional, and federal regulations.
Section 14 – Transport Information

DOT

| ID Number | Not Regulated as a hazardous material |
| UN Proper Shipping Name | Not Regulated as a hazardous material |
| Transport Hazard Class(es) | Not Regulated as a hazardous material |
| Packing Group | Not Regulated as a hazardous material |
| Placard | Not Regulated as a hazardous material |
| Marine Pollutant | No |
| Transport in Bulk Requirements | Not Regulated as a hazardous material |
| Special Transportation Precautions | Not Regulated as a hazardous material |
| Special Note | Not Regulated as a hazardous material |

Shipping Label | None

Placard | None

(Shipment by truck or rail in bulk)

Section 15 – Regulatory Information

Inventory Listings

| DSL | ☒ Listed ☐ Exempt |
| TSCA | ☒ Listed ☐ Exempt |

U.S. Federal Regulations

CERCLA: This material, as supplied, contains the following chemical(s) regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Clean Water Act: This product contains the following chemical(s) regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

SARA 311/312 Hazard Categories:

<table>
<thead>
<tr>
<th>Hazard Class</th>
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</table>

SARA 313: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains the following chemical(s) subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

None
U.S. State Regulations

California Proposition 65:
☒ This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations:

No State Listed

Section 16 – Other Information

Issuing Date: Aug 28, 2007
Revision Date: March 9, 2020
Version #: 20200309

Revision Note: Modified the CAS number for methyl esters in Section 3.

WARNING: POTENTIALLY HAZARDOUS MATERIAL. IMPROPER USE OR MISHANDLING CAN RESULT IN SERIOUS INJURY OR DEATH. THIS PRODUCT CONTAINS SUBSTANCES WHICH, IF MODIFIED, MAY BE FLAMMABLE AND MAY BURN OR EXPLODE IF HEATED OR EXPOSED TO FLAME OR OTHER IGNITION SOURCE OR WATER, OXIDIZING AGENTS, ACIDS OR OTHER CHEMICALS. AVOID INGESTION, INHALATION AND CONTACT WITH SKIN AND EYES.

Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS