(Material) Safety Data Sheet

Transport Symbol	WHMIS	NFPA	Personal Protective Equipment
Not controlled			

Original Preparation Date: 01-Jul-2009 **Revision Date:** *30-Jul-2013* **Revision Number:** *1*

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name:
On-Road Veg Oil Methyl Esters for B100

Product Code:
006500

Synonyms:
Vegetable oil derived fatty acid methyl esters, Methyl esters from veg oil

Use of the Substance / Preparation:
Fuel

Contact Manufacturer:
Archer Daniels Midland Company
4666 Faries Parkway
Decatur, IL 62526, USA
Telephone Number: (+1) 217-424-5200

Emergency response telephone number:
Chemtrec 1-800-424-9300 (CCN 1635)

2. HAZARDS IDENTIFICATION

Emergency Overview

Spontaneous combustion (fire) may result from oil soaked materials such as rags, steel wool, paper, and clothing. Place soaked materials in a sealed, metal container to prevent this.

Appearance	Physical State	Odor
Light yellow	Liquid	Slight (typical for vegetable compounds)

This product is NOT classified as hazardous according to 29 CFR 1910, amended to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (OSHA / GHS); or NOM-002-SCT-2003 (Mexico).

The product IS classified as hazardous according to SOR/88-66, the Canadian Controlled Products Regulations (CPR), often known as WHMIS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Esters

The following component(s) in this product are considered hazardous under applicable OSHA (USA), WHMIS (Canada), and/or NOM-002-SCT-2003 (Mexico) regulations

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Methyl alcohol	67-56-1	<1	OSHA / GHS: Flam. Liq. 3. Acute Tox.3. (oral) (dermal) (inhalation). STOT SE, Cat. 1. Affected organs: Optic nerve (nervus opticus), central nervous system. WHMIS: D1B, D2A, D2B. B2.

Non-hazardous Components

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Fatty acids, vegetable oil, methyl esters	68990-52-3	99-100	None known

4. FIRST AID MEASURES

Description of first aid measures
General Advice When symptoms persist or in all cases of doubt seek medical advice.
Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Skin Contact Wash off immediately with soap and plenty of water.
Inhalation Move to fresh air in case of accidental inhalation of vapours or decomposition products.
Ingestion Rinse mouth. Drink 1 or 2 glasses of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and affects, both acute and delayed
Eyes Not expected to pose health issues for the eye.
Skin Health injuries are not known or expected under normal use. Contact with product at elevated temperatures can result in thermal burns.
Inhalation Avoid breathing vapors or mists. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion May be harmful if swallowed. Not for human consumption.
Main Symptoms Nausea. Dizziness. Irritating to respiratory system.

Indication of any immediate medical attention and special treatment needed
Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties
Material may pose fire hazard because it is dispersed (or spread) by water.

Extinguishing media
Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO_2). Alcohol-resistant foam. Cool closed containers exposed to fire with water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture

Hazardous Combustion Products	Carbon monoxide (CO), Carbon dioxide (CO_2).
Specific Hazards Arising from the Chemical	Risk of ignition. Rags and other materials containing this product may heat and spontaneously ignite, if exposed to air. Store wiping rags and similar materials in metal cans with tightly fitting lids.
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Advice for fire-fighters
Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 0
Flammability 1
Stability and Reactivity 0
Physical hazard None known

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Remove all sources of ignition. Material can create slippery conditions.
Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Store contaminated materials in tightly closed containers until disposal.
Methods for Clean-up
Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Keep in suitable, closed containers for disposal. Large spills should be collected mechanically (remove by pumping) for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling
Ensure adequate ventilation. Do not use pressure to empty drums. Keep away from open flames, hot surfaces and sources of ignition.

Storage
Keep in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from open flames, hot surfaces and sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits
Components with workplace control parameters.

Chemical Name	ACGIH TLV	OSHA PEL	MEXICO	NIOSH
Methyl alcohol	STEL: 250 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 260 mg/m³	STEL: 250 ppm STEL: 310 mg/m³ TWA: 200 ppm TWA: 260 mg/m³	IDLH: 6000 ppm Skin STEL: 250 ppm STEL: 325 mg/m³ TWA: 200 ppm TWA: 260 mg/m³
vegetable oil mist	TVL: 10 mg/m(3)	TWA: 5 mg/m³ mist, respirable fraction TWA: 15 mg/m³ mist, total	TWA: 10 mg/m³ except irritant oils	TWA: 10 mg/m³ total mist TWA: 5 mg/m³ respirable mist

Engineering Measures Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment

Eye/face Protection. If exposed to airborne mist, or if splashing is possible, appropriate safety glasses with side-shields or safety goggles are recommended. If splashes are likely to occur, wear goggles

Skin and Body Protection Impervious gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used. Appropriate body protection should be selected based on activity and possible exposure.

Respiratory Protection In case of mist, spray or aerosol exposure wear suitable personal respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light yellow
Physical State	Liquid
Odor	Slight (typical for vegetable compounds)
Odor Threshold	No information available
pH	No information available
Flash Point	> 130 °C / 266 °F
Autoignition Temperature	No information available
Boiling point	> 200 °C / 392 °F
Melting/Freezing Point	No information available
Decomposition temperature	No information available
Oxidizing Properties	No information available
Water Solubility	Insoluble
Evaporation Rate	[Butyl acetate = 1.0] < 1
Vapor Pressure	<2 mmHg
Vapor Density	(Air = 1.0) > 1
Specific Gravity / Relative Density	0.88
Partition Coefficient (n-octanol/water)	No information available

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.
Possibility of Hazardous Reactions Hazardous polymerization does not occur. None under normal processing.
Conditions to Avoid Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials Strong oxidizing agents.
Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2).

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.			
Chemical Name	**Weight %**	**LD50 Oral**	**LD50 Dermal**	**LC50 Inhalation**
Methyl alcohol	<1	5628 mg/kg Rat	15800 mg/kg Rabbit	64000 ppm Rat 4 h 83.2 mg/L Rat 4 h
Skin corrosion/irritation	Based on available data, not, or only slightly irritating.			
Serious eye damage/eye irritation	Based on available data, not, or only slightly irritating.			
Respiratory or skin sensitisation	Based on available data, not expected to be a skin or respiratory sensitiser.			
Germ cell mutagenicity	Not expected to be mutagenic.			
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.			
Reproductive toxicity	The product, as a whole, is not considered to be a reproductive hazard according to the classification criteria of OSHA/GHS. May contain up to 0.2% methanol, which is known to result in teratogenicity and embryotoxicity in animals, and is considered a WHMIS hazard at levels >0.1%.			
STOT - single exposure	No evidence of toxicity.			
STOT - repeated exposure	No evidence of toxicity.			
Aspiration hazard	Based on available data, the classification criteria are not met.			

Potential health effects

Eyes Not expected to pose health issues for the eye.

Skin Health injuries are not known or expected under normal use. Contact with product at elevated temperatures can result in thermal burns.

Inhalation Avoid breathing vapors or mists. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion May be harmful if swallowed. Not for human consumption.

Main Symptoms Nausea. Dizziness. Irritating to respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Component Information:. Not classified for aquatic toxicity.

Chemical Name	Fresh Water Algae	Acute Fish Toxicity	Daphnia (Water flea)	Effects on micro-organisms	Other
Methyl alcohol		LC50: 96h 18-20ml/L (Oncorhynchus mykiss) static LC50: 96h 19500-20700mg/L (Oncorhynchus mykiss) flow-through			

Chemical Name	log Kow	BCF
Methyl alcohol	-0.77	

Persistence/Degradability No information available.

Mobility The product is insoluble and floats on water.

13. DISPOSAL CONSIDERATIONS

Whenever possible, as rules and regulations allow, please recycle or manage materials to minimize waste.

Waste Disposal Methods Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction. Oil soaked materials may spontaneously combust and should be properly managed to avoid ignition and heat sources or oxygen rich environments. Collect and store soaked materials in closed, metal containers to help prevent combustion.

Contaminated Packaging Empty containers should be decontaminated and taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Domestic transport regulations (USA)

DOT Not regulated

Chemical Name	CAS-No	Weight %	Reportable Quantity (RQ)
Methyl alcohol	67-56-1	<1	5000 lb / 2270 kg

Domestic transport regulations (Canada)

TDG Not regulated

Domestic transport regulations (Mexico)

MEX Not regulated

International transport regulations

ICAO Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

The components of this product are reported in the following inventories: U.S.A. (TSCA). Canada (DSL). EU (EINECS). Australia (AICS). Korea (ECL). China (IECSC). Japan (ENCS/ISHL). Philippines (PICCS). New Zealand (NZLoC).

USA

Federal Regulations

Ozone Depleting Substances:
No Class I or Class II material is known to be used in the manufacture of, or contained in, this product.

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product is not known to contain any chemicals which are subject to the reporting requirements of the Act or regulations contained in 40 CFR 372.

CERCLA/SARA 103-302
Sections 103-302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 CFR 103-302

Chemical Name	CAS-No	Weight %	RQ	TPQ
Methyl alcohol	67-56-1	<1	5000 lb / 2270 kg	

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 63)
This product is known to contain the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS
Methyl alcohol	67-56-1	<1	Present

State Regulations

California Proposition 65
This product is known to contain chemicals listed under Proposition 65.

Chemical Name	CAS-No	Weight %	Category
Methyl alcohol	67-56-1	<1	Developmental

State Right-to-Know
Component Information.

Chemical Name	Weight %	Massachusetts	Minnesota	New Jersey	Pennsylvania
Methyl alcohol	<1	Yes	Yes	Yes 1222	Yes Environmental hazard

Canada

WHMIS Product Classification
D2A - Materials causing other toxic effects, very toxic material. This classification reflects the presence of a hazardous component at a level greater than 0.1%. (Methyl alcohol - teratogenicity in animals; embryotoxicity in animals).

WHMIS Ingredient Disclosure List IDL
Component Information

Chemical Name	Weight %	WHMIS IDL	WHMIS Threshold limits
Methyl alcohol	<1	Listed	0.1%

(NPRI) Canadian National Pollutant Release Inventory
Component Information

Chemical Name	Weight %	NPRI
Methyl alcohol	<1	Part 1, Group A Substance; Part 5, Individual Substances; Part 4 Substance

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

Mexico

Mexico - Grade Slight risk, Grade 1

16. OTHER INFORMATION

Prepared By: ADM Fuels & Industrials
Original Preparation Date: 01-Jul-2009
Revision Date: 30-Jul-2013
Revision Number: 1
Reason for revision: New SDS format. This version replaces all previous versions.
Expiration Date: 07-May-2015

Abbreviations and acronyms
ICL - In Commerce List (Canada)
ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values
AICS - Australian Inventory of Chemical Substances (Australia)
CAS - Chemical Abstract Service
CHINA - Chinese Inventory of Existing Chemical Substances (China)
DSL - Domestic Substance List (Canada)
DOT - U.S. Department of Transportation
EC50 - Half maximal effective concentration
EINECS - European Inventory of Existing Commercial Chemical Substances (EU)
ELINCS - European List of Notified Chemical Substances (EU)
ENCS - Existing and New Chemical Substances (Japan) / ISHL - Industrial Health and Safety Law (Japan)
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IATA - International Air Transport Association Dangerous Goods Regulations
ICAO - International Civil Aviation Organisation
IMDG - International Maritime Dangerous Goods Code
IMO - International Maritime Organization
KECL - Korean Existing and Evaluated Chemical Substances (Korea)
LC50 - Lethal concentration that produces fatalities in 50% of a given test population
LD50 - Median lethal dose of a given test population
MEXICO - Mexico Occupational Exposure Limits
MEX - NOM-002-SCT/2003 List of Hazardous Substances and Materials Most Commonly Transported
NDSL - Non Domestic Substances List (Canada)
NFPA - National Fire Protection Association
NIOSH - National Institute of Occupational Safety and Health
NZIoC - New Zealand Inventory of Chemicals (New Zealand)
OSHA - Occupational Safety & Health Administration
OSHA PEL - Occupational Safety and Health Administration Permissible Exposure Limits
PICCS - Inventory of Chemicals and Chemical Substances (Philippines)
STEL - Short Term Exposure Limit: Concentrations that should not be exceeded except for short periods of time (usually 15-minutes)
STOT - Specific Target Organ Toxicity
STV - Short Term Value (same as STEL)
TDG - Transportation of Dangerous Goods (Transport Canada)
TSCA - Toxic Substances Control Act, Section 8(b) Inventory (USA)
TWA - Time Weighted Average: Average concentration that should not be exceeded during a work day (usually 8-hours)
WHMIS - Workplace Hazardous Materials Information System

The information provided on this (M)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.

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