HERBI OIL
Safety Data Sheet

Issue Date: June 2016

1. IDENTIFICATION

PRODUCT

Product Name: Herbi Oil
Product Description: Mixture Highly Refined Mineral Oil Base Stock (oil) with Additives.
Intended Use: Herbicidal oil spray adjuvant

Company Identification: Southern Agricultural Insecticides, Inc
P.O. Box 218
Palmetto, FL 34220
(941) 722-3285 Chemtrec (800) 424-9300 (24 hour transportation spill response)

2. HAZARD(S) IDENTIFICATION

Hazard Classification: Not hazardous

HEALTH HAZARDS

Hazard Risk Statement: Not hazardous
Signal Word: None
GHS Symbol: None

Precautionary Statement: Avoid contact with skin and eyes.
Precautionary Hazard -Response: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF IN EYES: Rinse cautiously with water. Remove contact lenses if present. Continue rinsing. May cause eye irritation.
Precautionary Hazard - Storage: Store locked up.
Precautionary Hazard - Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

Other: Repeated or prolonged contact may cause respiratory tract irritation. Massive exposure to vapors, fumes or mists may cause headache, dizziness ond/or drowsiness.

Safety Phrases:

Keep out of the reach of children.

This product is not formulated to contain ingredients which have exposure limits established by regulatory agencies. It is not hazardous to health as defined by the European Union Dangerous Substances I Preparations Directives. Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

Note: This information is based on test data from similar products.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Mixture	CAS #	Percent (wt)
The base oil may be a mixture of the Following:	The base oil may be a mixture of the Following CAS#s:	

1) Hydrotreated Distillate, Heavy Paraffin	64742-54-7	All combined
2) Hydrotreated Distillate, Light Paraffin	64742-55-8	80 - 90%
T-Det COE	Mixture	10-20%

4. FIRST AID MEASURES

Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin: Wash with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops get medical attention.

Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion: First aid is normally not required. Seek medical attention if discomfort occurs.

5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight streams of water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Carbon Monoxide, Aldehydes

FLAMMABILITY PROPERTIES

Flash Point ASTM D92 (open cup typical)		Flammable Limits
Herbi Oil	180 (356)	(Approximate volume in air):
		LEL: N/D UEL: NID
		Autoignition Temperature: N/D

6. ACCIDENTAL RELEASE MEASURES

SPILL MANAGEMENT

Land Spill: Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS Large Spills: Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

7. HANDLING AND STORAGE

HANDLING Prevent small spills and leakage to avoid slip hazard.
Static Accumulator: This material is a static accumulator.
STORAGE Do not store in open or unlabeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m3 - ACGIH TLV, 10 mg/m3 - ACGIH STEL.

Note: Information about recommended monitoring procedures can be obtained from the relevant agency(ies)/institute(s)

ENGINEERING CONTROLS
The level of protection and types of controls necessary will vary depending upon exposure conditions.

Control measures to consider: No special requirements under ordinary conditions of use and with adequate ventilation potential

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.
Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific Hygiene Measures Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS See Sections 6, 7, 12, 13.

9. PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below.

General Information		HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION		
Physical State	Liquid	Density at 20°C	0.856 - 0.862	
Color	Clear colorless to pale yellow	Flash Point typical °C (OF)	>160 (320)	See Section 5
Odor	Sweetish mineral odor	Flammable Limits	LEL: NID	UEL: N/D
Odor Threshold	ND	Autoignition Temperature:	ND	
		Boiling Point °C (OF)	>200°C	
OTHER INFORMATION		Vapor Density (Air=1)	NA	
Pour Point °C (OF)	-40 (-40) or below	Vapor Pressure	< 0.013 kPa (0.1 mm Hg) at 20°C	

Freezing Point ND

Evaporation Rate (N-Butyl Acetate = 1): ND

Viscosity are +/- 10

Viscosity cSt at 40°C 10

Solubility in Water Nil

10. STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Potential acute health effects

Inhalation: No known significant effects or critical hazards.

Ingestion: No known Signilficant effects or critical hazards.

Skin contact: No known significant effects or critical hazards.

Eye contact: No known significant effects or critical hazards.

PRODUCT

Route of Exposure	Conclusion I Remarks
INHALATION	
Toxicity: LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
INGESTION	
Toxicity: LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity: LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available	Minimally Toxic. Based on test data for structurally similar materials. Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation: Data avaiiable.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Repeated and/or Prolnged exposure may cause irritation to the skin, eyes, or respiratory tract.

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or/other screening tests. Dermal and inhalation studies showed minimal effects; lung non-

specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

CARCINOGENIC EFFECTS

Contains no carcinogens. Similar compounds essentially non-toxic. No component of this product at levels greater than 0.1 is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1 is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA), NTP or IARC.

Although there is no specific test data on all the base oil components, the mineral base oil would not be expected to exhibit carcinogenic potential based on what is known of the toxicity of mineral base oils in general.
The DMSO extract by IP 346 of the oil is less than 3. (Typical 0.2 with Maximum 0.5) Consequently it is not classified as a carcinogen.
The base oil in this product is severely hydro-treated by all hydro-processing route. By this refining history showed no evidence of carcinogenic potential.

MUTAGENIC EFFECTS: No component of this product at levels greater than 0.1 is classified by established regulatory criteria as a mutagen.

TERATOGENIC EFFECTS/DEVELOPMENTAL TOXICITY: No component of this product at levels greater than 0.1 is classified by established regulatory criteria as teratogenic or embryotoxic.

REPRODUCTION TOXICITY: No component of this product at levels greater than 0.1 is classified by established regulatory criteria as a reproductive toxin.

OVER - EXPOSURE SIGNS/SYMPTOMS

Skin No known significant effects or critical hazards.
Ingestion No known significant effects or critical hazards.
Inhalation No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION
The information given is basejd on data available for the material, the components of the material, and similar materials.

ECOTOXICITY
Material -- Not expected to be harmful to aquatic organisms.
MOBILITY
Base oil component -- Low solubility and floats and is expected to migrate from water to the land.
Expected to partition to sediment and wastewater solids.
PERSISTENCE AND DEGRADABILITY
Biodegradation:
Base oil component r Expected to be inherently biodegradable
BIOACCUMULATION POTENTIAL
Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

ECOLOGICAL DATA

Data for Highly Refined seV~relY Hydrotreated Base oil for similar materials

TEST	Duration	Organism Type	Test Results
Aquatic - Chronic Toxicity	21 day(s)	Water Flea	NOELR 1.05 mg/l: data for similar materials
	7 days	Fish	NOEC: > 5000mg/L (IUCLID Dataset)
	7 days	Aquatic Invertebrates	NOEC: > 5000mg/L (IUCLID Dataset)

Care should be taken to mi1nimize release of this product into the environment

Environmental Fate & Distribution	No Data Available
Persistence & Degradation lioxicity	No Data Available
Effect on Effluent Treatment	Product may be partially removed in biological treatment processes.

Other Typical (not a specification)
Acute Toxicity to Fish: No Data Available
Effect Concentration on Algae:No Data Available
Ready Biodegradability: No Data Available
Respiration Inhibition: No Data Available
Adsorption/Desorption: No Data Available
Abiotic Degradability-Hydrolysis : Not measurable

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OVER - EXPOSURE SIGNS/SYMPTOMS

Skin	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.

DISPOSAL RECOMMENDATIONS
Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION
European Waste Code: 13 01 10

NOTE: These codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actuall use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste disposal code(s).

This material is considered as hazardous waste pursuant to Directive 91/689/EEC on hazardous waste, and subject to the

provisions of that Directive unless Article 1 (5) of that Directive applies.

Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

14. TRANSPORT INFORMATION

LAND (ADR/RID):	Not Regulated for Land Transport
INLAND WATERWAYS (AD1NR):	Not Regulated for Inland Waterways Transport
SEA (IMDG):	Not Regulated for Sea Transport according to IMDG-Code
AIR (IATA):	Not Regulated for Air Transport

US DOT Classification:	Not Regulated
Marine Pollutant:	Not a Pollutant
Special Provisions for transport:	None Identified

ADR/RID Classification

UN number:	Not regulated.
Proper shipping name:	Not regulated
ADR/RID Class:	Not regulated
Packing Group:	Not regulated.

ICAO/IATA Classification

Proper shipping name:	Not regulated
IATA Class	
UN number:	Not regulated.
Packing Group:	Not regulated.

IMO/IMDG Classification

Proper shipping name:	Not regulated.
IMDG Class:	Not regulated
UN number:	Not regulated.
Packing Group:	Not regulated
Marine Pollutant:	Not pollutant.

USA: No special warning labels are required under OSHA 29CFR 1910.1200. OSHA hazard warnings are not applicable for this product; therefore no OSHA Warnings would appear on the label. No EPA hazard classification code.

15. REGULATORY INFORMATION

Europe

Material is not dangerous as defined by the EU Dangerous Substances/Preparations Directives.

EU LABELING: Not regulated according to EC Directives Material is not dangerous as defined by the EU Dangerous Substances/Preparations Directives.

Classification and labeling have been performed according to EU Directives 67/548/EEC, 1999/45/EC and 2001/58/EC (including amendments) and the intended use.
- Consumer applications.

United States

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances: None.
Section 304 CERCLA Hazardous Substances: None.
SARA 311/312 CATEGORIES

1. Immediate (Acute) Health Effects:	NO
2. Delayed (Chronic) Health Effects:	NO
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Canada

WHMIS (Canadian Workplace Hazardous Materials Information System)
This product when tested as Ia whole is not a controlled substance within the meaning of the Hazardous Products Act.

Germany: Water Hazardous Class (WGK): 1 (low hazard to water)

NATIONAL LEGISLATION / REGULATIONS

Ozone depleting chemicals: No ozone depleting chemicals are present or used in manufacture.

REGULATORY STATUS AND APPLICABLE LAWS AND REGULATIONS

Complies with the following national/regional chemical inventory requirements: **DSL, ENCS, TSCA**
Special:

Inventory	Status
AICS	All components are listed or exempted.
ELINCS	Restrictions Apply
IECSC	All components are listed or exempted.
KECI	All components are listed or exempted.
PICCS	All components are listed or exempted.

Detail

U.S. Regulations

US INVENTORY (TSCA 8b): Listed on inventory.
SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355):: This product is not regulated under Section 302 of SARA and 40 CFR Part 355.
SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370): Defined as Immediate (Acute)
Health Effects by OSHA under 29 CFR 1910.1200(d).
SARA 313 toxic chemical notification and release reporting: No products were found.
CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):: This material is not regulated under CERCLA Sections 103 and 107.

State Regulations

No products were found.
California prop. 65: No products were found

16. OTHER INFORMATION

This product safety data sheet was prepared in compliance Conforms to HazCom 2012/United States. Certain elements refer to Commission Directive 2001/58/EC , 91/155/EEC, 67/548/EEC and 1999/45/EC for reference, as well as their relevant amendments, on the approximation of laws, regulations and administrative provisions relative to the classification, packaging and labeling of dangerous substances and preparations.

Date of issue: Revised June 2016
ATE = Acute Toxicity Estimate!
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime/Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations I
N/D = Not determined, N/A = Not applicable

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U.S.A. Hazardous Material Information System and National Fire Protection Association (U.S.A.)

Degree of Hazard	NFPA	HMIS	HAZARD RATINGS	
Health	1	1	0	Insignificant
Fire	1	1	1	Slight
Reactivity	0	0	2	Moderate
Personal Protection		B	3	High

Southern Agricultural Insecticides, Inc. urges each customer or recipient of this (M)SDS study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.