



UPLAND™ MSO

Modified Vegetable Oil Concentrate

WARNING KEEP OUT OF REACH OF CHILDREN

May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May be harmful if inhaled. Read label before use. Keep container tightly closed. Keep only in original container. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

Personal Protective Equipment: Wear chemical-resistant gloves, long-sleeved shirt and long pants, and shoes plus socks.

NOTE: Read and follow all label directions and cautions on all products used.

Principal Functioning Agents:

Soybean Oil Methyl Ester.	91%
Alkylphenol Ethoxylate	9%
Total	100%

All ingredients are exempt from tolerance under 40 CFR 180.

FIRST AID

Call a poison control center or doctor immediately for treatment advice. Have the product container with you when calling a poison control center or doctor, or going for treatment.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, after the first 5 minutes, then continue cautiously rinsing eye. If eye irritation persists get medical advice/attention.

IF ON SKIN OR CLOTHING: Take off contaminated clothing and wash it before reuse. Wash skin with plenty of soap and water for several minutes. Get medical advice/attention.

IF SWALLOWED: Unless advised otherwise by a poison control center or doctor, have person rinse mouth with water, if able. Do not give anything by mouth to an unconscious person.

IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth to mouth if possible.

GENERAL INFORMATION

Upland MSO is a combination of a soybean-based modified vegetable oil and high quality nonionic surfactant (NIS) emulsifiers.

Upland MSO improves diffusion of the active into the target by softening the waxy cuticle, saturating this barrier layer with oil and affording a faster way for the active ingredient to reach plant tissues.

Upland MSO helps to increase active ingredient performance wherever there is low relative humidity and high temperatures, when weeds are tall or have a thick cuticle or anytime the active ingredient label calls for an MSO, MVO or other oil-based adjuvant.

DIRECTIONS FOR USE

If the active ingredient label calls for or allows the use of an MSO, follow the

instructions on the label. Care should be used on sensitive species as the product could increase sensitivity to light.

If the applicator does not have experience with a specific tank mixture and/or the combination of products being used is not recommended by the active ingredient label, a compatibility (jar) test and a phytotoxicity test should be run before using the product.

If the label allows the use of an MSO but does not recommend a rate, add 1-1/2 to 2 pints per acre of Upland MSO to the spray tank. Extra product may be needed on weeds with heavier wax, or under dry or dusty conditions or for more mature weeds.

**NOT FOR AQUATIC USE
MIXING**

Always follow instructions on the active ingredient label.

If instructions are not provided, follow these general instructions:

Fill spray tank 2/3 or 3/4 full of water. Add dry flowables (DF) and wettable powders (WP). Disperse thoroughly. Continue the addition of other active ingredients, then adjuvants including **Upland MSO**, according to the directions on the active ingredient label.

Note: Tank mixtures including **Upland MSO** should be utilized within 36 hours for best results.

STORAGE AND DISPOSAL

Storage: Store in a cool well-ventilated place. Keep in original container tightly closed. Do not reuse empty container. Do not store with food, feed, or other material to be used or consumed by humans or animals. Do not contaminate water supplies. For optimal storage, store between 40° and 90° F.

Disposal: Do not contaminate water, food or feed by storage or disposal. Dispose of contents in container to an approved waste disposal facility in accordance with all federal, state and local regulations. Triple rinse (or equivalent) adding rinse water to application tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by local regulations. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at www.acrecycle.org. Decontaminated containers and materials must be disposed of in a manner allowed by local, state and federal laws and regulations. Conditions of Sale and Warranty Limitation: The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of West Central Distribution, LLC or the seller. All such risks shall be assumed by the buyer. West Central Distribution, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. West Central Distribution, LLC makes no other express or implied warranty of fitness or merchantability or any other express or implied warranty. In no case shall West Central Distribution, LLC or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product. West Central Distribution, LLC and the seller offer this product, and the Buyer and the User accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of West Central Distribution, LLC.



WA Reg. No. 46661-14002



SAFETY DATA SHEET

RENDUR UPLAND™ MSO

SDS DATE: 3/13/2015

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: RENDUR UPLAND™ MSO

DISTRIBUTOR: West Central Distribution, LLC.
ADDRESS: 2700 Trott Ave. SW, P.O. Box 897, Willmar, MN 56201
PHONE: (320) 235-8518

EMERGENCY CHEMTREC PHONE: US: 1-800-424-9300 International: 1-202-483-7616

CHEMICAL NAME: Proprietary mixture
CHEMICAL FAMILY: Methyl Ester of Soya Oil
CHEMICAL FORMULA: Mixture

PRODUCT USE: Adjuvant

SECTION 1 NOTES: None

SECTION 2: HAZARDOUS INGREDIENTS

GHS Ratings:

Skin corrosion/irritation Category 2
Eye damage/irritation Category 2A



Signal Word: WARNING

GHS HAZARDS

H315 Causes skin irritation.
H319 Causes serious eye irritation.

GHS PRECAUTIONS

P102 Keep out of reach of children.
P103 Read label before use.
P233 Keep container tightly closed.
P234 Keep only in original container.
P261 Avoid breathing dust, fume, gas, mist, vapors or spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P301+312 IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do then continue rinsing.
P332+313 If skin irritation occurs: Get medical advice or attention.
P337+313 If eye irritation persists: Get medical advice or attention.
P362 Take off contaminated clothing and wash before reuse.

SECTION 3: HAZARDS IDENTIFICATION

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT</u>
Fatty acid, methyl esters	67762-38-3	90 – 100%
Proprietary	Proprietary	1 – 10%

NOTE: Product does NOT contain any pesticides or pest control agents.

SECTION 3 NOTES: These specific chemical identity and or exact percentage (concentration) of composition has been withheld as a trade secret.

CARCINOGENICITY

OSHA: No **ACGIH:** No **NTP:** No **IARC:** No **OTHER:** No

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SECTION 4: FIRST AID MEASURES

Have the product container with you when calling a poison control center or doctor, or going for treatment.

EYE CONTACT - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present, after the first 5 minutes, then continue cautiously rinsing eye. If eye irritation persists get medical advice or attention.

SKIN CONTACT - IF ON SKIN OR CLOTHING: Take off contaminated clothing and wash it before reuse. Wash skin with plenty of soap and water for several minutes. Call a poison center, doctor, chemical manufacturer, importer, or distributor to specify the appropriate source of emergency medical advice. If skin irritation occurs: Get medical advice or attention.

INGESTION - IF SWALLOWED: Call a POISON CENTER, doctor or physician if you feel unwell. Unless advised otherwise by a poison control center or doctor, have person rinse mouth with water, if able. Do not give anything by mouth to an unconscious person.

INHALATION - IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth to mouth if possible.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 4 NOTES: None

SECTION 5: FIRE FIGHTING MEASURES

NFPA HAZARD CLASSIFICATION

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: -

IN CASE OF FIRE: Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer, or ordinary) for large fires. Water stream may spread flames.

SPECIAL FIRE FIGHTING PROCEDURES: Use alcohol-type or universal-type foams on larger fires. Smaller fires should be extinguished with carbon dioxide or dry chemical. Do not use water or foam directly on the fire. Use self-contained breathing apparatus with fighting any fire in an enclosed area.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Do not use water or foam directly on the fire.

HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION 5 NOTES: None

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Surround and absorb all spills. Material should be collected and disposed in proper manner. Dike the area to prevent spill from spreading. Soak up spill with a suitable absorbent such as clay, sawdust or kitty litter. Sweep up absorbed material and place in a chemical waste container for disposal. Wear suitable protective equipment.

SECTION 6 NOTES: None

SECTION 7: HANDLING AND STORAGE

HANDLING Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash before reuse. Wear protective gloves, protective clothing, eye protection and face protection.

STORAGE: Store in a cool well-ventilated place. Keep in original container tightly closed. Do not reuse empty container. Do not store with food, feed, or other material to be used or consumed by humans or animals. Do not contaminate water supplies. For optimal storage, store between 40° and 90° F.

SECTION 7 NOTES: None

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION:	Normal room ventilation (mechanical) or outdoor use should be satisfactory.
RESPIRATORY PROTECTION:	Wear a NIOSH/OSHA approved respirator, approved for use with propionic acid, if necessary.
EYE PROTECTION:	Chemical goggles and face shield.
SKIN PROTECTION:	Chemical gloves, long-sleeved shirts and pants.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:	Eye wash and safety shower should be easily accessible.
WORK HYGIENIC PRACTICES:	Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse.
EXPOSURE GUIDELINES:	If exposed, see section 4 for acute exposure first aid.
SECTION 8 NOTES:	None

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, pale yellow	FLAMMABLE LIMITS IN AIR, UPPER:	Unknown
ODOR:	Fatty odor	(% BY VOLUME) LOWER:	Unknown
ORDER THRESHOLD:	Not known	VAPOR PRESSURE (mmHg):	@ Unknown F: Unknown C: Unknown
PHYSICAL STATE:	Liquid	VAPOR DENSITY (AIR = 1):	@ Unknown F: Unknown C: Unknown
pH AS SUPPLIED:	Not applicable	RELATIVE DENSITY:	0.889 to 0.904
pH (Other):	4-6 @ 1%	EVAPORATION RATE:	Unknown
INITIAL BOILING POINT:	F: Unknown C: Unknown	BASIS (butyl acetate=1):	
BOILING POINT RANGE:	F: Unknown C: Unknown	SOLUBILITY IN WATER:	Dispersible
MELTING POINT:	F: Unknown C: Unknown	PARTITION COEFFICIENT: (n-octanol/water):	Unknown
FREEZING POINT:	F: Unknown C: Unknown	AUTO-IGNITION TEMPERATURE:	Unknown
FLASH POINT:	F: >200 C: >93	DECOMPOSITION TEMPERATURE:	Unknown
METHOD USED:	PMCC	VISCOSITY:	@ Unknown F: Unknown C: Unknown
FLAMMABILITY (solid, gas):	Not applicable		

SECTION 9 NOTES: Values are not product specifications.

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

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SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable Unstable

CONDITIONS TO AVOID (STABILITY): Prolonged excessive heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong oxidizing agents

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: CO₂, CO

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID (POLYMERIZATION): None known

SECTION 10 NOTES: None

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

MIXTURE TOXICITY LD50 Acute oral toxicity >3989mg/kg (Rat)
LD50 Acute dermal toxicity >4950mg/kg (Rabbit)

COMPONENT TOXICITY None

SECTION 11 NOTES: None

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Not available
ECOTOXICITY: Not available

BIOACCUMULATIVE POTENTIAL: Not available

MOBILITY IN SOIL: Not available

OTHER ADVERSE EFFECTS: Not available

SECTION 12 NOTES: None

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not contaminate water, food or feed by storage or disposal. Dispose of contents in container to an approved waste disposal facility in accordance with all federal, state and local regulations.

CONTAINER DISPOSAL: Triple rinse (or equivalent) adding rinse water to application tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by local regulations.

RCRA HAZARD CLASS: None

SECTION 13 NOTES: None

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

DOT Shipping Description: Not Regulated

U.S. Surface Freight Classification: ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610; CLASS: 60) Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

OTHER AGENCIES: None

SECTION 14 NOTES: None

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SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): Mixture not listed

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): Not Regulated

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): Not Regulated

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: None

INTERNATIONAL REGULATIONS: None

SECTION 15 NOTES: None

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: None

DISCLAIMER:

The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.