



**Safety Data Sheet**

<b>NFPA HAZARD RATING</b>				<b>U.S. TRANSPORT SUMMARY</b>	
0	Least				Regulated in bulk packaging (119 gallons and greater); see Section 14 for additional information.
1	Slight	2	Health		
2	Moderate	2	Flammability		
3	High	1	Reactivity		
4	Severe				

<b>SECTION 1: IDENTIFICATION</b>	
<b>Product Name:</b> Cleanse 2EC <b>EPA Registration #:</b> 1381-204 <b>Common Name:</b> Clethodim <b>Chemical Description:</b> Cyclohexene oxime herbicide <b>Recommended Uses:</b> Agricultural Plant Growth Regulator – See product label for complete list of uses and use sites. <b>Restrictions for Use:</b> See product label for information regarding restrictions on the use of this product.	
<b>Manufactured For:</b> <b>WINFIELD SOLUTIONS, LLC</b> P. O. Box 64589 St. Paul, MN 55164-0589	<b>MEDICAL EMERGENCY TELEPHONE NUMBER: 1-877-424-7452 (24hrs)</b>  <b>Non-Emergency Business Inquiries: 1-855-494-6343</b> Mon – Fri 8am – 5pm (Central Standard Time)
<b>FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:                      CHEMTREC 1-800-424-9300 (24 hours)</b>	

<b>SECTION 2: HAZARDS IDENTIFICATION</b>			
<b>EMERGENCY OVERVIEW:</b> Dark amber liquid. Combustible liquid. Causes moderate eye irritation.			
<b>POTENTIAL HEALTH EFFECTS:</b>			
<b>Eyes:</b> Causes moderate but temporary eye irritation.			
<b>Skin:</b> May cause mild but temporary skin irritation with prolonged contact.			
<b>Inhalation:</b> May cause mild irritation of the upper respiratory tract.			
<b>Ingestion:</b> May cause irritation of the gastric system.			
<b>Preexisting Conditions:</b> None known			
<b>Chronic Health Effects:</b> None known			
<b>Carcinogenicity</b>	NTP: Not listed	IARC: Not listed	OSHA: Not listed
<b>OSHA HCS 2012 CLASSIFICATION:</b> Flammable Liquid Category 4; Eye Irritation Category 2A			
<b>SIGNAL WORD:</b> WARNING			
<b>HAZARD STATEMENTS:</b>			
Combustible liquid. Causes serious eye irritation.			
<b>Percent of product with unknown toxicity:</b> 0%			
<b>PRECAUTIONARY STATEMENTS:</b>			
<b>Prevention:</b> Keep away from flames and hot surfaces. - No smoking. Wear protective gloves, eye protection and face protection. Wash hands thoroughly after handling.			

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**Response:** In case of fire: Use dry chemical, foam, carbon dioxide, water fog or water spray to extinguish.

**If in eyes:** Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.  
**Storage:** Store in a well-ventilated place. Keep cool.  
**Disposal:** Dispose of contents/container in accordance with Federal, state and local regulations.

<b>SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS</b>		
<b>Ingredient</b>	<b>% (wt)</b>	<b>CAS Reg. #</b>
Clethodim	26.4%	99129-21-2
Petroleum distillates (contains)	65.0 – 70.0%	64742-94-5
Trimethylbenzene	2.0 – 3.0%	-
Naphthalene	5.0 – 7.0%	91-20-3
*Ingredients not specifically listed are non-hazardous and/or are considered to be confidential business information under 29 CFR 1910.1200(i).		
See Section 8 for exposure limits.		

<b>SECTION 4: FIRST AID MEASURES</b>	
<b>Inhalation:</b>	Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
<b>Ingestion:</b>	Seek medical attention or call a poison control center for treatment advice. Do not induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>Eyes:</b>	Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.
<b>Skin:</b>	Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if irritation persists.
<b>NOTE TO PHYSICIAN:</b> Contains a petroleum distillate solvent, vomiting may cause aspiration pneumonia.	

<b>SECTION 5: FIRE FIGHTING MEASURES</b>
<b>Suitable Extinguishing Media:</b> Dry chemical, foam, carbon dioxide, water fog or water spray.
<b>Special Fire Fighting Procedures:</b> Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Avoid breathing vapors; keep upwind. Combustible liquid. Can form explosive mixtures at temperatures at or above the flashpoint.
<b>Hazardous Combustion Products:</b> Can burn in fire, releasing irritating and toxic gases such as oxides of nitrogen and sulfur or toxic compounds of chlorine due to thermal decomposition or combustion.
<b>Unusual Fire and Explosion Hazards:</b> Explosive vapor could form from ruptured containers.

<b>SECTION 6: ACCIDENTAL RELEASE MEASURES</b>
<b>Personal Precautions:</b> Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.
<b>Environmental Precautions:</b> Do not allow spilled product to enter sewers or waterways.
<b>Methods for Containment:</b> Contain spilled product by diking area with sand or earth.
<b>Methods for Clean-up:</b> Cover contained spill with an inert absorbent material such as sand, vermiculite or other appropriate material. Avoid the use of combustible materials such as sawdust. Scoop, or sweep up material and place in a container for disposal. Do not place spilled material back in original container. Eliminate all ignition sources.
<b>Other Information:</b> None known

<b>SECTION 7: HANDLING AND STORAGE</b>
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**Handling:** RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS AND WORKERS must refer to the pesticide product label and Directions for Use attached to the product for Agricultural Use Requirements in accordance with the EPA Worker Protection Standard 40 CFR part 170. Ensure adequate ventilation. Immediately clean up spills that occur during handling. Keep containers closed when not in use. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**Storage:** Store in cool, dry areas away from children, food and feed products in an area away from incompatible substances. Protect packaging from physical damage. Protect from exposure to fire. Avoid temperatures above 90°F (35°C) **See pesticide product label for additional storage information.**

**Minimum Storage Temperature:** Not determined

**Other Precautions:** Consult Federal, state and local laws and regulations pertaining to storage.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Guidelines	OSHA PEL	ACGIH TLV	NIOSH REL
<b>Component:</b> Petroleum distillates		100 ppm	
Trimethylbenzene		25 ppm (TWA)	
Naphthalene	50 mg/m <sup>3</sup> , 10ppm (TWA)	10 ppm (TWA) 15 ppm (STEL)	

**NOTE TO END USERS:** PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING LISTED IN THIS SECTION IS FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD REFER TO THE PESTICIDE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING.

**Respiratory Protection:** If conditions are poorly ventilated, use a NIOSH approved air-purifying respirator with cartridges/canisters approved for general pesticides.

**Engineering Controls:** **Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred.

**Protective Gloves:** Wear chemically protective gloves to prevent exposure to skin.

**Eye Protection:** To avoid contact with eyes, wear chemical safety goggles or safety glasses and full face shield. Contact lenses are not protective eye devices.

**Other Protective Clothing or Equipment:** Wear long-sleeve shirt, long pants and shoes plus socks to prevent skin contact.

**Work/Hygienic Practices:** Never eat, drink, nor use tobacco in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Liquid	<b>Specific Gravity (H<sub>2</sub>O=1):</b>	1.15 – 1.21 (typical)
<b>Vapor Pressure (mm Hg):</b>	Not determined	<b>Density (lbs/gallon):</b>	9.6 – 10.1 lbs/gallon (typical)
<b>Vapor Density (Air=1):</b>	Not determined	<b>Melting Point/Freezing Point:</b>	Not determined
<b>Solubility in Water (wt %):</b>	Emulsifies	<b>Boiling Point/Range:</b>	Not determined
<b>Viscosity:</b>	3.33 cSt (20°C); 2.15 cSt (40°C)	<b>pH:</b>	3.8 – 4.8
<b>Appearance and odor:</b>	Dark amber liquid	<b>Flash Point:</b>	149°F (65°C)

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** None known

**Chemical Stability:** Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Unstable when exposed to extremes of pH, elevated temperatures, oxygen or U.V. light.

**Possibility of Hazardous Reactions:** Will not occur.

**Conditions to Avoid:** Avoid temperatures above 90°F (35°C), exposure to air or direct sunlight. Keep containers sealed.

**Incompatible Materials:** Oxidizing materials

**Hazardous Decomposition Products:** Oxides of hydrogen, nitrogen and sulfur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

**Eye Effects:** Moderately irritating (rabbit)  
**Skin Effects:** Moderately irritating (rabbit). LD50 >5,000 mg/kg (rat). Not a contact sensitizer (guinea pig)  
**Acute Inhalation Effects:** LC50 >2.03 mg/L (rat)  
**Acute Oral Effects:** LD50 5,000 mg/kg (rat)  
**Specific Target Organ Toxicity:** None known

**CHRONIC TOXICITY**

**Chronic Effects:** None known  
**Carcinogenicity:** None known  
**Mutagenicity:** None known  
**Teratogenicity:** Not known to exhibit reproductive effects. Some teratogenic (birth defect) effects were noted in rats tested at maternally toxic doses.  
**Reproductive Toxicity:** None known

**POTENTIAL HEALTH EFFECTS:**

**Eyes:** Causes moderate but temporary eye irritation.  
**Skin:** May cause mild but temporary skin irritation with prolonged contact.  
**Inhalation:** May cause mild irritation of the upper respiratory tract.  
**Ingestion:** May cause irritation of the gastric system.

**SECTION 12: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL SUMMARY:** Not determined

**ECOTOXICITY DATA:**

**Fish Acute and Prolonged Toxicity:** Clethodim Technical:  
96 hour LC50 for Rainbow Trout = 67 mg/L  
96 hour LC50 for Bluegill = 120 mg/L  
**Aquatic Invertebrate Acute Toxicity:** Not determined  
**Aquatic Plant Toxicity:** Not determined  
**Bird Acute and Prolonged Toxicity:** Clethodim Technical:  
Dietary LC50 for Bobwhite Quail >4,000 ppm  
Dietary LC50 for Mallard Duck >4,000 ppm  
**Honeybee Toxicity:** Contact LD50 >100 ug/bee

**ENVIRONMENTAL EFFECTS:**

**Soil Absorption/Mobility:** Clethodim is very soluble in water and mobile in soil.  
**Persistence and degradability:** Clethodim degrades rapidly via photolysis with a soil half-life of 3 – 10 days.  
**Bioaccumulative Potential:** Not determined  
**Other adverse effects:** Not determined

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste:** Dispose of in accordance with applicable Federal, state and local laws and regulations.  
**Container:** Triple rinse and recycle the container or dispose of in accordance with Federal, state and local laws and regulations.  
**See pesticide product label for full instructions on disposal.**  
**RCRA Characteristics:** It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

**SECTION 14: TRANSPORT INFORMATION**

<b>DOT: (Ground)</b>	This product is not regulated by the U.S. Department of Transportation as a hazardous material for ground shipment in quantities less than 119 gallons. For quantities of 119 gallons or greater: NA1993, Combustible liquid n.o.s. (contains petroleum distillates, naphthalene), 3, PG III, RQ (naphthalene) While the hazard class is a 3, the product is classified as combustible rather than flammable as allowed by 49 CFR 173.120(b)(2)
<b>IMDG: (Sea)</b>	Not determined
<b>IATA: (Air)</b>	Not determined
<b>TDG: (Canada)</b>	Not determined

**SECTION 15: REGULATORY INFORMATION**

**TSCA Inventory:** This product is exempt from TSCA inventory listing requirements as it is solely for FIFRA regulated use.

**SARA Title III Information:**  
**Section 302 - Extremely hazardous substances:** None listed  
**Section 311/312 – Hazard Categories:** Immediate (Acute); Delayed (Chronic); Fire  
**Section 313 –** The following chemicals are subject to the reporting requirements of Section 313 of Title III, Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372:  
 Naphthalene (CAS # 91-20-3)

**CERCLA -** This product contains the following chemicals which have a reportable quantity (RQ) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):  
 Naphthalene has an RQ of 100 lbs which is met with 180 gallons of product.

**EPA Registration Information:** This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

WARNING  
 Causes substantial but temporary eye irritation.  
 Avoid contact with skin. Do not get in eyes, on clothing or on skin.  
 Harmful if swallowed or inhaled.  
 Avoid breathing vapors or spray mist.  
 Prolonged or frequent repeated skin contact may cause allergic reactions in some individuals.

**California Proposition 65:** This product does not contain any components known to the state of California to cause cancer and/or reproductive harm.

**U.S. State Worker and Community Right-To-Know (RTK) Information (CT, IL, MA, MN, NH, NJ, PA, RI):**

Chemical Name	CAS #	State(s)
Petroleum distillates	64742-94-5	IL, MN, NJ, PA, RI

**Canadian Domestic Substances List:** Not determined

**WHMIS Classification:** This product is not approved for use in Canada. WHMIS classification is not determined.

**SECTION 16: OTHER**

**Disclaimer:** The information presented herein is based on available data from reliable sources and is correct to the best of WinField Solutions' knowledge. WinField Solutions, LLC makes no warranty, express nor implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

**Revision Date:** November 30, 2017                      **Supersedes document dated:**  
**Sections Revised:**