



SAFETY DATA SHEET

SDS ID: 74530-16

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	RO-NEET® Herbicide
Product use / type:	Herbicide
EPA Registration No.:	74530-16
Chemical name / active ingredient(s):	S-ethyl cyclohexylethylthiocarbamate (cycloate)
Manufacturer / Registrant:	Helm Agro US, Inc. 401 E. Jackson St., Suite 1400 Tampa, FL 33602
Manufacturer's Telephone:	813-621-8846
Email:	info@helmagro.com
Chemical emergencies:	1-800-424-9300 (Chemtrec)

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Classification

Flammability	Category 4
Serious Eye Damage / Eye Irritation	Category 2B
Skin Corrosion / Irritation	Category 2

EMERGENCY OVERVIEW

Signal Word: **WARNING**

Pictogram:



Appearance: Amber

Physical state: Liquid

Odor: Strong pungent

Hazard Statements:

- H227 – Combustible liquid
- H315 – Causes skin irritation
- H320 – Causes eye irritation

Precautionary Statements:

- Keep away from flames and hot surfaces. – No smoking.
- Wear protective gloves and eye protection.
- Wash hands and face thoroughly after handling.

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- 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 / advice.
- IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention or advice. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical attention or advice.
- IN CASE OF FIRE: Use water fog, foam, dry chemical or CO2 to extinguish.
- Store in well ventilated place. Keep cool.
- Dispose of contents and container in accordance with applicable Federal, State and local regulations.

Other Information / Potential Hazards:

May be irritating to respiratory system.

May be harmful if inhaled.

Toxic to aquatic organisms.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %
S-ethyl cyclohexylethylthiocarbamate	1134-23-2	73.9
Kerosene	8008-20-6	13 – 25 **

** Exact concentration of components withheld as a trade secret.

4. FIRST AID MEASURES

If in Eyes:	<ul style="list-style-type: none">• Hold eye open and rinse gently with water for 15-20 minutes.• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.• Call a poison control center or doctor for treatment advice.
If on skin or clothing:	<ul style="list-style-type: none">• Remove contaminated clothing and shoes.• Rinse skin with plenty of water for 15 minutes. If irritation develops, call a poison control center or seek medical advice.
If inhaled:	<ul style="list-style-type: none">• Move person to fresh air.• If person is not breathing, call 911 or get medical help, then give artificial respiration, preferably with the aid of a pocket mask equipped with a one-way valve.• Call a poison control center or seek medical advice.
If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor immediately for treatment advice• Do not give any liquid to the person.• Do not induce vomiting unless told to do so by a poison control center or doctor.• Do not give anything by mouth to an unconscious person.
Note to Physician:	<ul style="list-style-type: none">• Treat symptomatically. Risk of aspiration if ingested.

5. FIRE-FIGHTING MEASURES

Flammable properties:	Combustible liquid
Extinguishing media:	Water fog, dry chemical, foam or CO ₂
Unsuitable extinguishing media:	High pressure water streams.
Firefighting measures:	Evacuate area. Use extinguishing media appropriate for surrounding fire. Prevent contaminated firefighting waters and spillage from entering sewers, drains and waterways.
Protective equipment and precautions for firefighters:	Wear full protective firefighting gear including self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent).
Hazardous decomposition products:	Oxides of carbon and nitrogen. May release irritating and toxic vapors due to thermal decomposition.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Wear protective gloves / clothing and eye protection. Avoid contact with eyes, skin and clothing. Ensure adequate ventilation.
Environmental precautions:	Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.
Methods for containment:	Contain spill with inert material (e.g. sand, silical gel, binder). Do not use combustible material (e.g. sawdust).
Methods for cleanup:	Pick up and transfer to properly labeled containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling:	Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product.
Precautions for safe storage:	Store and handle in accordance with all current regulations and standards. Keep container tightly closed. Store in a cool and well-ventilated place.
Incompatible storage situations:	Separate pesticides during storage to prevent cross-contamination of other pesticides, fertilizers, food, and feed.

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8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Guidelines:

	NIOSH	ACGIH	OSHA
Kerosene (8008-20-6)	100 mg/ m3 REL	200 mg/m3 TLV-TWA total hydrocarbon vapor	No data

Engineering controls:

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection:

Wear chemical-tight goggles. If splashing is likely to occur, wear a full face shield.

Body / skin protection:

Long sleeved shirt, long pants, shoes plus socks.

Hand protection:

Wear gloves / hand protection.

Respiratory protection:

If handling without sufficient ventilation, wear a dust / mist filtering respirator with organic cartridge(s).

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid, clear
Appearance:	Amber
Odor:	Strong pungent
pH:	7.0 – 10.0
Boiling point:	No information available
Flash point:	168°F (75.5°C)
Relative density:	0.97 g/ml
Water solubility:	Miscible
Viscosity:	8.31 Centistokes @ 68°F (20°C)
Log pow:	No information available

10. STABILITY AND REACTIVITY

Reactivity / chemical stability:

Stable under normal temperature and conditions.

Conditions / Materials to avoid:

Direct sunlight. Strong oxidizing agents. Galvanized steel and unlined steel containers.

Hazardous decomposition products:

Oxides of carbon, Oxides of nitrogen.

Hazardous reactions:

Not expected under normal conditions of handling and use.

11. TOXICOLOGICAL INFORMATION

Product toxicology:

Acute oral LD50:

Rat LD₅₀: 3129 mg/kg

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Acute dermal LD₅₀:	Rat LD ₅₀ : >5000 mg/kg
Acute inhalation LC₅₀:	Rat 4-hr LC ₅₀ : >2.06 mg/l
Eye irritation:	Moderate eye irritation.
Skin irritation:	Moderate skin irritation.
Sensitization:	Not a sensitizer.

Component toxicology:

Kerosene (8008-20-6)

Acute oral LD₅₀:	Rat LD ₅₀ : >2000 mg/kg
Acute dermal LD₅₀:	Rat LD ₅₀ : >2000 mg/kg
Acute inhalation LC₅₀:	Rat LC ₅₀ : >5000 mg/m ³

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is listed with NTP, IARC or OSHA.

Mutagenic effects: No information available

12. ECOLOGICAL INFORMATION

Environmental Hazards:	Toxic to aquatic organisms. Do not apply to any body of water.
Ecotoxicity:	96-hour LC ₅₀ : 4.5 mg/L <i>Onchorhynchus mykiss</i>
S-ethyl cyclohexylethylthiocarbamate (1134-23-2)	96-hour LC ₅₀ : 4.6 mg/L <i>Lepomis macrochirus</i>
Persistence and degradability:	48-hour EC ₅₀ : 24 mg/L <i>Daphnia magna</i> No information available

13. DISPOSAL CONSIDERATIONS

Product disposal: Wastes resulting from the use of this product that cannot be used must be disposed in accordance with applicable Federal, State or local regulations. Refer to product label.

Container disposal: Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed or offered for recycling. Clean container promptly after emptying.

14. TRANSPORT INFORMATION

U.S. DOT: Not regulated in package quantities <119 gallons.
NA1993, Combustible liquid, n.o.s. (kerosene), Combustible liquid, PGIII

15. REGULATORY INFORMATION

U.S. Federal Regulations:

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:

Signal word: Caution

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Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.

TSCA:

All components of this product are listed on or are exempt from listing on the TSCA chemical inventory.

SARA 311/312:

Acute health, Fire

SARA 313:

S-ethyl cyclohexylethylthiocarbamate (1134-23-2)

CERCLA:

None listed.

U.S. State Regulations:

State Right-to-Know Regulations:

Component	CAS No.	CA	MA	MN	NJ	PA
S-ethyl cyclohexylethylthiocarbamate	1134-23-2				X	
Kerosene	8008-20-6					X

California Proposition 65: This product contains one or more substances known to the state of California to cause cancer and/or reproductive/developmental effects.

16. OTHER INFORMATION

NFPA Ratings:	Health	Fire	Instability
	2	2	0

Revision No.:

3.0

Revision Date:

05 August 2014

Revision Note:

Address change

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; CST - Centistokes; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; GHS - Global Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other information / Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

End of Safety Data Sheet