

Gro Tec, Inc.
P.O. Box 290 - Madison, Ga 30650
MATERIAL SAFETY DATA SHEET

ELIMINATOR WEED & GRASS KILLER II READY-TO-USE

This product is used by Homeowners and Professionals

MSDS NO. ELI-40

NOVEMBER 2002

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SECTION 1 - PRODUCT IDENTIFICATION

Chemtrec Transport Emergency

Non-Transportation Emergency

- Poison Control Center

Telephone: 1-800-424-9300

Pennington/Gro Tec, Inc.: 706-342-1234

Atlanta: 1-800-282-5846

Product name: Eliminator Weed & Grass Killer Ready-To-Use

EPA Reg. No.: 71995-27-59144

Product Use: Herbicide

Chemical name: Not applicable

Synonyms: Not applicable

SECTION 2 – COMPOSITION/INFORMATION OF INGREDIENTS

Active Ingredient: Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}

Composition:

<u>Component</u>	<u>CAS No.</u>	<u>% by weight (approximate)</u>
Isopropylamine salt of glyphosate	38641-94-0	1.92
Other ingredients		98.08

OSHA Status: This product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3 – HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and odor (color/form/odor): Hazy – Clear/Liquid/Slight

CAUTION!
CAUSES MODERATE EYE IRRITATION

Potential health effects:

Likely routes of exposure: Skin contact, eye contact, inhalation

Eye contact, short term: Causes temporary eye irritation

Skin contact, short term: Not expected to product significant adverse effects when recommended use instructions are followed.

Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

Refer to section 11 for toxicological and section 12 for environmental information.

SECTION 4 – FIRST AID MEASURES

Eye contact: Immediately flush with plenty of water. If easy to do, remove contact lenses.

Skin contact: Take off contaminated clothing, wristwatch, jewelry. Wash affected skin with plenty of water. Wash clothes before re-use.

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SECTION 4 – FIRST AID MEASURES

Inhalation: Remove to fresh air.

Ingestion: Immediately offer water to drink. Do NOT induce vomiting unless directed by medical personnel. If symptoms occur, get medical attention.

Advice to doctors: This product is not an inhibitor of cholinesterase.

Antidote: Treatment with atropine and oximes is not indicated.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point: Does not flash

Extinguishing media: Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

Unusual fire and explosion hazards: None - Environmental precautions: see section 6

Hazardous products of combustion: Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)

Fire fighting equipment: Self contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protection recommended in section 8.

Environmental precautions: SMALL QUANTITIES: Low environmental hazard
LARGE QUANTITIES: Minimize spread. Keep out of drains, sewers, ditches & water ways.

Methods of cleaning up: SMALL QUANTITIES: Flush spill area with water.
LARGE QUANTITIES: Absorb in earth, sand, absorbent material. Dig up heavily contaminated soil. Collect in containers for disposal. Refer to section 7 for types of containers. Flush residues with small quantities of water. Minimize use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

SECTION 7 – HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

Handling: When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Thoroughly clean equipment after use. Do not contaminate drains, sewers, and water ways when disposing of equipment rinse water. Emptied containers retain vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Storage: Compatible materials for storage: Stainless steel, glass lining, fiberglass, aluminum, plastic.
Incompatible materials for storage: galvanized steel, unlined mild steel, see section 10.
Keep out of reach of children. Keep away from food, drink, and animal feed. Keep only in the original container.

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SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits:

<u>Components</u>	<u>Exposure Guidelines</u>
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established
Other ingredients	No specific occupational exposure limit has been established
Engineering controls:	No special requirement when used as recommended.
Eye protection:	If there is significant potential for contact: Wear chemical goggles
Skin protection:	No special requirements when used as recommended
Respiratory protection:	No special requirement when used as recommended

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Color/Color Range:	Hazy – Clear
Form:	Liquid
Odor:	Slight
Flash Point:	Does not flash
Specific gravity:	1.01 @ 20 degrees C
Solubility:	Water; completely miscible
pH:	4.4 – 5.4
Partition coefficient (low Pow):	<0.000 (active ingredient)

SECTION 10 – STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of handling and storage.
Hazardous decomposition:	Thermal decomposition: Hazardous products of combustion: see section 5
Materials to avoid/ Reactivity:	Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

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SECTION 11 – TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professional. Data obtained on product, similar products and on components are summarized below.

Skin irritation:	Rabbit, 6 animals, OECD 404 test Days to heal: 7 Primary irritation index (PII): 0.9/8.0 Slight irritation FIFRA category IV
Eye irritation:	Rabbit, 6 animals, OECD 405 test Days to heal: 7 Moderate irritation FIFRA category III
Similar formulation –	
Acute oral toxicity:	Rat, LD50 (limit test): >5,000 mg/kg body weight Practically non-toxic FIFRA category IV No mortality
Acute dermal toxicity:	Rat, LD50 (limit test): >5,000 mg/kg body weight Practically non-toxic FIFRA category IV No mortality
Acute inhalation toxicity:	Rat, LC50, 4 hours, aerosol: > 10 mg/L Practically non-toxic FIFRA category IV Maximum attainable concentration
Skin sensitization:	Guinea pig, Buehler test: Positive incidence: 0%
N-(phosphonomethyl)glycine: {glyphosate}	
Mutagenicity:	In vitro and in vivo mutagenicity test(s): Not mutagenic
Repeated dose toxicity:	Rabbit, dermal, 21 days: NOAEL toxicity: >5,000mg/kg body weight/day Target organs/systems: none Other effects: none Rabbit, oral, 3 months: NOAEL toxicity: >20,000 mg/kg diet Target organs/systems: none Other effects: none

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SECTION 11 – TOXICOLOGICAL INFORMATION

Carcinogenicity:

Mouse, oral, 24 months
NOEL tumor: >30,000 mg/kg diet
NOAEL toxicity: ~5,000 mg/kg diet
Tumors: none
Target organs/systems: liver
Other effects: decrease of body weight gain, histopathologic effects

Rat, oral, 24 months
NOEL tumor: >20,000 mg/kg diet
NOAEL toxicity: ~8,000 mg/kg diet
Tumors: none
Target organs/systems: eyes
Other effects: decrease of body weight gain, histopathologic effects

Toxicity to reproduce/fertility:

Rat, oral, 3 generations
NOAEL toxicity: > 30 mg/kg body weight
NOAEL reproduction: >30 mg/kg body weight
Target organs/systems in parents: none
Other effects on parents: none
Target organs/systems in pups: none
Other effects in pups: none

Development toxicity/teratogenicity:

Rat, oral, 6 – 19 days of gestation
NOAEL toxicity: 1,000 mg/kg body weight
NOAEL development: 1,000 mg/kg body weight
Other effects in mother animal: decrease of body weight gain, decrease of survival
Developmental effects: weight loss, post-implantation loss, delayed ossification
Effects on offspring only observed with maternal toxicity.

Rabbit, oral, 6 – 27 days of gestation
NOAEL toxicity: 175 mg/kg body weight
NOAEL development: 175 mg/kg body weight
Target organs/systems in mother animal: none
Other effects in mother animal: decrease of survival
Developmental effects: none

SECTION 12 – ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologist and other environmental specialist. Data obtained on similar products and on components are summarized below.

Similar formulation:

Aquatic toxicity, fish:

Golden orfe (*Leuciscus idus*)
Acute toxicity, 96 hours, static, LC50: 491 mg/L
Practically non-toxic

Rainbow trout (*Oncorhynchus mykiss*)
Acute toxicity, 96 hours, static, LC50: 322 mg/L
Practically non-toxic

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SECTION 12 – ECOLOGICAL INFORMATION

Aquatic toxicity, invertebrates:	Water flea (<i>Daphnia magna</i>) Acute toxicity, 48 hours, static, EC50: 1,634 mg/L Practically non-toxic
Aquatic toxicity, algae/aquatic plants:	Green algae (<i>Selenastrum capricornutum</i>) Acute toxicity, 72 hours, static, EbC50 (biomass): 15 mg/L Slightly toxic
N-(phosphonomethyl)glycine; {glyphosate}:	
Avian toxicity:	Bobwhite quail (<i>Colinus virginianus</i>) Dietary toxicity, 5 days, LC50: >4,640 mg/kg diet Mallard duck (<i>Anas platyrhynchos</i>) Dietary toxicity, 5 days, LC 50: >4,640 mg/kg diet Practically non-toxic Bobwhite quail (<i>Colinus virginianus</i>) Acute oral toxicity, LD 50: > 3,851 mg/kg body weight Practically non-toxic
Arthropod toxicity:	Honey bee (<i>Apis mellifera</i>) Oral, 48 hours, LD 50: 100 ug/bee Honey bee (<i>Apis mellifera</i>) Contact, 48 hours, LD50: >100 ug/bee Practically non-toxic
Bioaccumulation:	Bluegill sunfish (<i>Lepomis macrochirus</i>) Whole fish: BCF: <1 No significant bioaccumulation is expected
Dissipation:	Soil, field Half life: 2 –174 days Koc: 884 – 60,000 L/kg Adsorbs strongly to soil Water, aerobic Half life: < 7 days

SECTION 13 – DISPOSAL CONSIDERATIONS

Product:	Keep out of drains, sewers, ditches, and water ways. Recycle if appropriate facilities/equipment available. Follow all local/regional/national/international regulations.
Container:	See the individual container label for disposal information. Do NOT re-use container. Recycle if appropriate facilities/equipment available. Follow all local/regional/national/international regulations.

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SECTION 14 – TRANSPORTATION INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

Not hazardous under the applicable DOT, ICAO/IATA, IMO, TDG and Mexican regulations.

SECTION 15 – REGULATORY INFORMATION

TSCA Inventory: Exempt

SARA TITLE III Rules: Section 311/312 Hazard Categories – Immediate
Section 302 Extremely Hazardous Substances – Not applicable
Section 313 Toxic Chemical(s) – Not applicable

CERCLA Reportable Quantity: Not applicable

SECTION 16 – OTHER INFORMATION

NOTICE FROM GRO TEC, INC.

The information contained herein is offered only as a guide to the handling of this specific material. Since such information does not relate to use of the material with any other material or in any process, any person using this information must determine for himself its suitability for any particular application. The buyer and user assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of the product label.

ABBREVIATIONS KEY:

N/A = Not available or applicable

N/E = Not established

TLV=Threshold Limit Value

PEL= Permissible Exposure Limit