

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

FORMULATED FOR:

VERDICON, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300
Medical Emergencies: 1-800-301-7976
U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: KLEENUP® PRO HERBICIDE
CHEMICAL NAME: Glyphosate; N- (phosphonomethyl) glycine, in the form of its isopropylamine salt
CHEMICAL FAMILY: Herbicide
EPA REG. NO.: 228-366-65783
MSDS Number: 228366-05-VER

MSDS Revisions: Sections 3 and 13

Date Of Issue: 05/02/05

Supersedes: 03/10/04

2. HAZARDS IDENTIFICATION SUMMARY

KEEP OUT OF REACH OF CHILDREN – CAUTION - CAUTION: Causes moderate eye irritation. Harmful if swallowed or inhaled. Do not get in eyes or on clothing. Avoid breathing spray mist. **Eye Contact:** This product may cause pain, redness and tearing based on toxicity studies. **Skin contact:** This product is no more than slightly toxic and no more than slightly irritating based on toxicity studies. **Ingestion:** This product is no more than slightly toxic based on toxicity studies. No significant adverse health effects are expected to develop if only small amounts (less than a mouthful) are swallowed. Ingestion of similar formulations has been reported to produce gastrointestinal discomfort with irritation of the mouth, nausea, vomiting and diarrhea. Oral ingestion of large quantities of one similar product has been reported to result in hypotension and lung edema, **Inhalation:** This product is no more than slightly toxic if inhaled based on toxicity studies. **Medical Conditions Aggravated by Exposure:** None known. This product is a clear, viscous greenish/yellow solution with no odor.

3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Glyphosate, isopropylamine salt	41.00	38641-94-0	None Established
Other Ingredients	59.00	(1071-83-6 for Glyphosate Acid) Mixture	None Established

4. FIRST AID MEASURES

IF IN EYES: Hold eye open and rinse slowly and 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 SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have a person sip a glass of water if able to do so. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-301-7976. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

FLASH POINT (°F/Test Method): None
FLAMMABLE LIMITS (LEL & UEL): Not applicable
EXTINGUISHING MEDIA: Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.
HAZARDOUS COMBUSTION PRODUCTS: May include but are not limited to CO₂, CO, NO_x.
SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool containers exposed to fire. Remain upwind. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and place in a chemical waste container. Flush residual spill area with water. Large spills that soak into the ground should be dug up, placed in metal drums and disposed of in accordance with instructions provided under DISPOSAL, Section 13 of this MSDS. Contact appropriate state agency when considering a land spreading disposal option. Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided under DISPOSAL, Section 13 of this MSDS. Any recovered spilled liquid should be similarly collected and disposed of. Check local, state and federal regulations for proper disposal.

CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Spray solutions of this product should be mixed, stored or applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers. Do not mix, store or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tanks. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas that may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

STORAGE: Store above 10°F / -12°C to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room at 68°F / 20°C for several days to redissolve and shake or roll to mix well before using. Product is stable under normal conditions of storage and handling for at least 5 years. Store in a cool, well-ventilated place away from foodstuffs, reducing agents and acids. Do not contaminate water, food, or feed by storage or disposal.

**EPA HANDLER REQUIREMENTS
Worker Protection Standard – 40 CFR 170**

Personal Protective Equipment: Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks and protective eyewear. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

RESPIRATORY PROTECTION: Not normally required, if vapors or dusts exceed acceptable levels, wear a NIOSH approved pesticide respirator.

EYE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, hat, rubber boots with socks. Wear rubber or chemical-resistant gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
For product	Not Established	Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear, viscous greenish/yellow solution with no odor	SOLUBILITY: Soluble
SPECIFIC GRAVITY (Water = 1): 1.16 g/ml @ 20°C	BULK DENSITY: 9.68 pounds/gal.
VAPOR PRESSURE: Not established	BOILING POINT: Not established
PERCENT VOLATILE (by volume): Not established	EVAPORATION RATE: Not established

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.

10. STABILITY AND REACTIVITY

STABILITY: Stable

INCOMPATIBILITY: Acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

HAZARDOUS POLYMERIZATION: Will not occur. This product can react with caustic (basic) materials to liberate heat. This is not a polymerization but rather a chemical neutralization in an acid base reaction.

CONDITIONS TO AVOID: Excessive heat, open flame, other ignition sources.

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀ (rat): >5000 mg/kg; FIFRA Category IV	Acute Dermal LD₅₀ (rabbit): >5000 mg/kg; FIFRA Category IV
Eye Irritation (rabbit): Moderately irritating; FIFRA Category III	Skin Irritation (rabbit): Slightly irritating; FIFRA Category IV
Inhalation LC₅₀ (rat): >2.05 mg/L (4-hr); FIFRA Category IV	Skin sensitization (guinea pig): Not determined
Carcinogenic Potential: None listed in OSHA, NTP, IARC or ACGIH	

12. ECOLOGICAL INFORMATION

This product has been shown to be slightly to moderately toxic in aquatic studies. This product has been shown to be practically non-toxic to avian species following sub-acute dietary exposure. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water supplies when disposing of equipment wash waters.

13. DISPOSAL CONSIDERATIONS

Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state and local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Container Disposal: Do not reuse container. Triple rinse (or equivalent), adding rinse water to spray tank, then offer for recycling at an ACRC site (go to <http://www.acrecycle.org/> for locations) or by reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

Container Disposal for Refillable Containers: After use, close all openings that have been opened during use and replace all caps. Return the container to the point of purchase or other designated locations for return of the empty refillable container. Do not contaminate water, food, or feed by storage or disposal.

14. TRANSPORT INFORMATION

DOT Shipping Description: NOT REGULATED BY USDOT

U.S. Surface Freight Classification: COMPOUND, TREE OR WEED KILLING, NOI (NMFC 50320, SUB 2:CLASS: 60)

15. REGULATORY INFORMATION

NFPA & HMIS Hazard Ratings:		NFPA		HMIS
		1 Health	0 Least	1 Health
		1 Flammability	1 Slight	1 Flammability
		0 Instability	2 Moderate	0 Reactivity
			3 High	H PPE
			4 Severe	

SARA Hazard Notification/Reporting

SARA Title III Hazard Category: Immediate Y Fire N Sudden Release of Pressure N
 Delayed N Reactive N

Reportable Quantity (RQ) under U.S. CERCLA: Not listed

SARA, Title III, Section 313: Not listed

RCRA Waste Code: Not listed

CA Proposition 65: Not listed

16. OTHER

MSDS STATUS: Sections 3 and 13 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental/ Regulatory Services

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