

1. PRODUCT AND COMPANY IDENTIFICATION**Identification of the substance or mixture****Product Name** HDX™ Weed and Grass Killer Concentrate,**EPA Reg. No.** 86068-3-84009**Product Type** Herbicide**Company/Undertaking Identification****Distributed by** Ragan & Massey, Inc.
101 Ponchatoula Parkway
Ponchatoula, Louisiana 70454
United States**Emergency and contact telephone numbers**

Emergency telephone number	1 (800) 434-9300	CHEMTREC® (24 hrs)
	1 (703) 527-3887	
	1 (800) 222-1222	Poison Control Center
Contact telephone number	1 (800) 264-5281	Product Information
	1 (985) 386-6042	

2. HAZARDS IDENTIFICATION

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

Physical Hazards

Not Hazardous

Health Hazards**Eye Irritation** Category 2B**Carcinogen** Category 1B**Environmental Hazards****Hazards to aquatic environment, acute** Category 2**Hazards to aquatic environment, chronic** Category 2**Signal Word**

(No signal word)

Hazard Statements

Causes eye irritation. May cause cancer. Toxic to aquatic life with long lasting effects.



Precautionary Statements

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Wear protective gloves, protective clothing and eye protection. Wash hands thoroughly after handling.

Avoid unintended release to the environment.

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.

IF exposed or concerned: Get medical advice.

Collect spillage.

Store locked up.

Dispose of contents in accordance with local, state, and federal regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	Percentage	CAS-Number
N-(phosphonomethyl)glycine, Isopropylamine salt	41.0	38641-94-0
Other ingredients	Trade Secret	Trade Secret

Synonyms: Glyphosate IPA; N-(phosphonomethyl) glycine, in the form of its isopropylamine salt. Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

These specific chemical identities and/or exact percentage (concentration) of composition have been withheld as a trade secret.

4. FIRST AID MEASURES

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

IF IN EYES

Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.

IF SWALLOWED

Have person sip a glass of water if able to swallow. 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 symptoms develop, get medical advice.

IF INHALED

Move person to fresh air. If symptoms develop, get medical advice.

IF ON SKIN OR CLOTHING

Take off contaminated clothing. Wash with soap and water. Get medical attention if irritation develops and persists.

Most Important symptoms/effects, acute and delayed: May cause moderate eye irritation.

Indication of Immediate medical attention and special treatment if needed: None expected. For ingestion there is no specific antidote available. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:	Recommended for large fires: foam or water spray. Recommended for small fires: dry chemical or carbon dioxide.
Special Fire Fighting Procedures:	Firefighters should wear NIOSH approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards:	If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.
Hazardous Decomposition: Materials (Under Fire Conditions)	May produce gases such as oxides of carbon, nitrogen, and phosphorous.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.
Environmental Precautions:	Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.
Methods for Containment:	Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Cleanup and Disposal:	Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.
Other Information:	Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

HANDLING	<p>Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Users should 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.</p> <p>Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined containers.</p> <p>DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL 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 which may form a highly combustible</p>
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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 68° F (20° C) for several days to redissolve and shake, roll or agitate to mix well before using. Do not contaminate water, foodstuff, feed or seed by storage or disposal.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear chemical goggles. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, socks and shoes. Washing facilities should be readily accessible to the work area.

Respiratory Protection: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Glyphosate IPA	NE	NE	NE	NE	
Other ingredients	NE	NE	NE	NE	

NE=Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Transparent greenish, yellow liquid	Melting Point	No data available
Odor	Odorless	Freezing Point	No data available
Odor Threshold	No data available	Initial Boiling Point	No data available
pH	4.84 (1% w/w solution in DIW)	Boiling Point Range	No data available
		Flash Point	Not applicable due to aqueous salt based composition

Evaporation Rate	No data available	Partition Coefficient (n-octanol / water)	Unknown
Flammability (solid, gas)	No data available	Autoignition Temperature	No data available
Vapor Pressure	No data available	Decomposition Temperature	No data available
Vapor Density @	No data available	Viscosity	29.5 cPs @ 20°C 14.3 cPs @ 40°C
Relative Density	1.16 g/mL @ 20°C	VOC Emission Potential (%)	0.0
Solubility in Water	No data available		

Notes: Values are not product specifications.

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

Reactivity	Not reactive.
Chemical Stability	This material is stable under normal handling and storage conditions.
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Excessive heat. Do not store near heat or flame.
Incompatible Materials	Strong oxidizing agents: bases and acids. This product reacts with galvanized steel or unlined steel (except stainless steel) to produce hydrogen gas that may form a highly combustible gas mixture which could flash or explode.
Hazardous Decomposition Products	Under fire conditions, may produce gases such as oxides of carbon, nitrogen and phosphorous.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eye contact, Skin contact

Symptoms of Exposure:

Eye Contact:	The undiluted product may cause pain, redness and tearing based on toxicity studies.
Skin Contact:	Slightly toxic and slightly irritating based on toxicity studies.
Ingestion:	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.
Inhalation:	Low inhalation toxicity.

Delayed, immediate and chronic effects of exposure: None reported.

Toxicological Data:

Data from laboratory studies on this product are summarized below:

Oral:	Rat LD ₅₀ : >5,000 mg/kg
Dermal:	Rat LD ₅₀ : >5,000 mg/kg
Inhalation:	Rat 4-hr LC ₅₀ : >2.05mg/l (no mortality at highest dose tested)

- Eye Irritation:** Rabbit: Moderately irritating (MMTS=18.0)
- Skin Irritation:** Rabbit: Non-irritating (PDII= 1.7)
- Skin Sensitization:** Not a contact sensitizer in guinea pigs following repeated skin exposure.
- Subchronic (Target Organ) Effects:** Repeated overexposure to glyphosate may decrease body weight gains and effects to liver.
- Carcinogenicity / Chronic Health Effects:** Prolonged overexposure to glyphosate may cause effects to the liver. EPA has given glyphosate a Group E classification (evidence of non-carcinogenicity in humans). In 2015 IARC classified glyphosate as a probable human carcinogen Group 2A based on limited human evidence and some evidence in animals.
- Reproductive Toxicity:** In laboratory animal studies with glyphosate, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
- Developmental Toxicity:** In animal studies, glyphosate did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.
- Genotoxicity:** Glyphosate has produced no genetic changes in a variety of standard tests using animals and animal or bacterial cells.

ASSESSMENT CARCINOGENICITY:

Component	Regulatory Agency Listing as Carcinogen			
	ACGIH	IARC	NTP	OSHA
Glyphosate	No	2A	No	No
Other ingredients	No	No	No	No

12. ECOLOGICAL INFORMATION

Ecotoxicity

Data on Glyphosate IPA

- 96-hour LC₅₀ Rainbow Trout:** >1000 mg/l
- 48-hour EC₅₀ Daphnia:** 930 mg/l
- 72-hour ErC₅₀ Algae:** 166mg/l

Data on Glyphosate Acid

- 96-hour LC₅₀ Bluegill:** 120 mg/l
- 96-hour LC₅₀ Rainbow Trout:** 786 mg/l
- 48-hour EC₅₀ Daphnia:** 780 mg/l
- 96-hour EC₅₀ Diatoms:** 1.3 mg/l
- 14-day EC₅₀ Duckweed:** 25.5 mg/l
- 72-hour EC₅₀ Algae:** 450 mg/l
- Bobwhite Quail Acute Oral LD₅₀:** >3,851 mg/kg
- Bobwhite Quail 5-day Dietary LC₅₀:** >4,640 ppm
- Mallard Duck 5-day Dietary LC₅₀:** >4,640 ppm

Environmental Fate:

In the environment glyphosate adsorbs strongly to soil and is expected to be immobile in soil. Glyphosate is readily degraded by soil microbes to AMPA (aminomethyl phosphonic acid) that is further degraded to

carbon dioxide. Glyphosate and AMPA are unlikely to enter ground water due to their strong adsorptive characteristics. Terrestrially-applied glyphosate has the potential to move into surface waters through soil erosion because it may be adsorbed to soil particles suspended in the runoff. Aquatic applications registered for certain formulations may also result in glyphosate entering surface waters. Complete degradation is slow, but dissipation in water is rapid because glyphosate is bound in sediments and has low biological availability to aquatic organisms. These characteristics suggest a low potential for bioconcentration in aquatic organisms and this has been verified by laboratory investigations of glyphosate bioconcentration in numerous marine and freshwater organisms with and without soil. The maximum whole body bioconcentration factors for fish were observed to be less than 1X. Bioconcentration factors for sediment dwelling mollusks and crayfish tended to be slightly higher, but were always less than 10X. In addition, any residues accumulated in organisms were rapidly eliminated.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Wastes resulting from 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 or local procedures. Emptied container retains vapors and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Container Handling and Disposal:

Nonrefillable Containers 5 Gallons or Less: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable containers larger than 5 gallons: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. If recycling or reconditioning not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10

seconds after the flow begins to drip.

**Refillable containers
larger than 5 gallons:**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

14. TRANSPORT INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT	Not regulated
IMDG	Not regulated
IATA	Not regulated

15. REGULATORY INFORMATION

EPA FIFRA INFORMATION

This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

Caution. Causes moderate eye irritation. Harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling.

U.S. FEDERAL REGULATIONS

TSCA Inventory: This product is exempted from TSCA because it is solely for FIFRA regulated use.

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):

Acute Health, Chronic Health

Section 313 Toxic Chemical(s):

None

Reportable Quantity (RQ) under U.S. CERCLA:

None

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 1 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

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