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1. IDENTIFICATION

PRODUCT: EZ-Ject™ Diamondback® Herbicide Shells
EPA Reg. No.: 83220-1
EPA Est: 69117-NE-1

2. HAZARD(S) IDENTIFICATION



WARNING

EMERGENCY OVERVIEW:

Appearance and odor (color/form/odor): Colorless to yellow liquid, (viscous) / odorless

CAUTION: Keep out of reach of children

POTENTIAL HEALTH EFFECTS

Likely routes of exposure: Skin contact, eye contact.

Eye contact, short term: Causes moderate eye irritation.

Skin contact, 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

ACTIVE INGREDIENT:

Glyphosate, N-(phosphonomethyl) glycine, in the form of its isopropylamine salt (CAS No. 38641-94-0) 83.5%
OTHER INGREDIENTS. 16.5%
Total 100.0%

OSHA Status: This product is not hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST-AID MEASURES

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

Call a poison control center or doctor for treatment advice.

If Swallowed: Have person sip a glass of water if able to swallow. 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.

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.

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

Antidote: Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

Flash point: Does not flash.

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

Unusual fire and explosion hazards: Minimize use of water to prevent environmental contamination. 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.

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 and waterways. Notify authorities.

Methods for cleaning up: SMALL QUANTITIES: Flush spill area with water. LARGE QUANTITIES: Absorb in earth, sand or 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.

7. HANDLING AND STORAGE

Follow good industrial practice in housekeeping and personal hygiene.

Handling: When using, do not eat, drink or smoke. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside and then wash thoroughly and put on clean clothing. Thoroughly clean equipment after use. Do not contaminate drains, sewers and waterways when disposing of equipment rinse water.

Storage: Minimum storage temperature: 0°C. Maximum storage temperature: 50°C

Compatible materials for storage: stainless steel, aluminum, fiberglass, plastic, glass lining. 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. Partial crystallization may occur on prolonged storage below the minimum storage temperature. If frozen, place in warm room and shake frequently to put back into solution. Minimum shelf life: 5 years. Follow all local/regional/national/international regulations.

8. EXPOSURE CONTROLS AND 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: No special requirement when used as recommended.

Skin protection: For repeated or prolonged contact wear chemical-resistant gloves.

Respiratory protection: No special requirement when used as recommended.

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 not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Color/color range: Colorless to yellow

Form: Liquid (viscous)

Odor: Odorless

Flash point: Does not flash

Specific gravity: 1.23 @ 20°C / 4°C

Vapor pressure: 23.5 mmHg

Solubility: Water: Completely miscible

pH: 4.4 - 4.8 @ 54 g/l

Partition coefficient (log Pow): -3.2 @ 25°C (glyphosate)

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of handling and storage.

Hazardous decomposition: Thermal decomposition: Hazardous products of combustion: see section 5. When heated, may give off toxic fumes.

Materials to avoid/reactivity: Reacts with galvanized steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

11. TOXICOLOGICAL INFORMATION

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

Acute oral toxicity:

Rat, LD50 (limit test): approximately 5,000 mg/kg body weight. FIFRA category III. No mortality.

Acute dermal toxicity:

Rabbit, 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: > 4.24 mg/L. Practically non-toxic. FIFRA category IV. No mortality. Maximum attainable concentration.

Skin irritation:

Rabbit, 6 animals, Draize test: Days to heal: 3. Primary Irritation Index (PII): 0.0/8.0. Essentially non-irritating. FIFRA category IV.

Eye irritation:

Rabbit, 6 animals, OECD 405 test: Days to heal: 0. FIFRA category IV

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: NOEL toxicity: > 5,000 mg/kg body weight/day. Target organs/systems: none. Other effects: none

Rat, oral, 3 months: NOEL toxicity: > 20,000 mg/kg diet. Target organs/systems: none. Other effects: none

Chronic effects/carcinogenicity:

Mouse, oral, 24 months: NOEL tumor: > 30,000 mg/kg diet. NOEL 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. NOEL toxicity: ~ 8,000 mg/kg diet. Tumors: none. Target organs/systems: eyes. Other effects: decrease of body weight gain, histopathologic effects

Toxicity to reproduction/fertility:

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

Developmental toxicity/teratogenicity:

Rat, oral, 6 - 19 days of gestation: NOEL toxicity: 1,000 mg/kg body weight. NOEL 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: NOEL toxicity: 175 mg/kg body weight. NOEL development: 175 mg/kg body weight. Target organs/systems in mother animal: none. Other effects in mother animal: decrease of survival. Developmental effects: none

12. ECOLOGICAL INFORMATION (NON-MANDATORY)

This section is intended for use by ecotoxicologists and other environmental specialists.

Aquatic toxicity, fish:

Bluegill sunfish (*Lepomis macrochirus*): Acute toxicity, 96 hours, static, LC50: > 1,000 mg/L. Practically non-toxic.

Rainbow trout (*Oncorhynchus mykiss*): Acute toxicity, 96 hours, static, LC50: > 1,000 mg/L. Practically non-toxic.

Aquatic toxicity, invertebrates

Water flea (*Daphnia magna*): Acute toxicity, 48 hours, static, EC50: 930 mg/L. Practically non-toxic.

Aquatic toxicity, algae/aquatic plants:

Green algae (*Scenedesmus subspicatus*): Acute toxicity, 72 hours, static, ErC50 (growth rate): 166 mg/L. Practically non-toxic.

Soil organism toxicity, invertebrates:

Earthworm (*Eisenia foetida*): Acute toxicity, 14 days, LC50: > 5,000 mg/kg dry soil. Practically non-toxic.

N-(phosphonomethyl)glycine; {glyphosate}:

Avian toxicity:

Bobwhite quail (*Colinus virginianus*): Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet. No more than slightly toxic.

Mallard duck (*Anas platyrhynchos*): Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet. No more than slightly toxic.

Bobwhite quail (*Colinus virginianus*): Acute oral toxicity, single dose, LD50: > 3,851 mg/kg body weight. Practically non-toxic.

Arthropod toxicity:

Honey bee (*Apis mellifera*): Oral, 48 hours, LD50: 100 µg/bee

Honey bee (*Apis mellifera*): Contact, 48 hours, LD50: > 100 µg/bee. Practically non-toxic.

Bioaccumulation:

Bluegill sunfish (*Lepomis macrochirus*): 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

13. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

Do not contaminate water, foodstuffs, feed or seed by storage or disposal.

Pesticide Storage: Keep container closed to prevent spills and contamination. At the end of each use period, remove unused shells from EZ-Ject shell injection system. Replace unused shells in original container and reseal. Store with the open end of the shell pointing up.

Pesticide Disposal: 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.

Container Disposal: Non-refillable container; do not reuse or refill this container. Triple rinse (or equivalent) then offer for recycling, if available; otherwise, discard in trash.

14. TRANSPORT 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.

15. REGULATORY INFORMATION (NON-MANDATORY)

TSCA Inventory: Exempt

SARA Title III Rules:

Section 311/312 Hazard Categories: Not applicable.

Section 302 Extremely Hazardous Substances: Not applicable.

Section 313 Toxic Chemical(s): Not applicable.

CERCLA Reportable quantity: Not applicable.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.

Follow all local/regional/national/international regulations.

Please consult supplier if further information is needed.

All tests were conducted following OECD guidelines for Good Laboratory Practices (GLP).

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

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