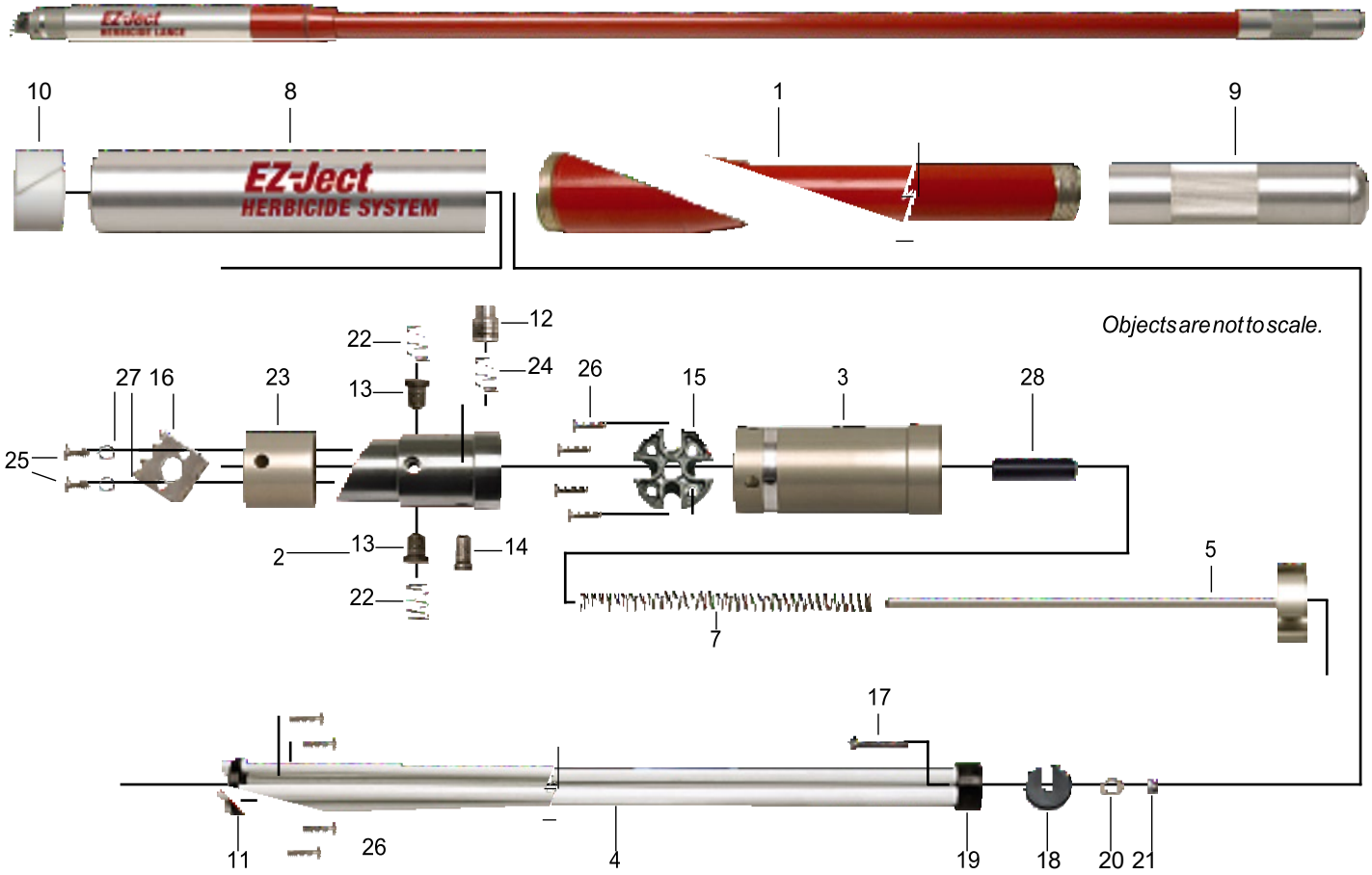
EZ-Ject Herbicide Lance

Instruction Guide

Petroleum County
Conservation District
813 North Broadway Ave
Winnett, MT 59087

EZ-Ject ™ Herbicide Lance Parts Chart



DRAWING #	PART #	DESCRIPTION
1	1001a	* Handle Assembly —standard length 47.5" (120 cm)
1	1001b	* Handle Assembly —short length 25.25" (64 cm)
2	1002	Injector Nose
3	1003	Injector Head
4	1004a	* Shell Chamber Assembly —standard length 55" (140 cm)
4	1004b	* Shell Chamber Assembly —short length 32.5" (83 cm)
5	1005	Injector Rod and Holder
7	1007	Injector Spring
8	1008	Head Sleeve
9	1009	End Cap
10	1010	Sleeve Bearing
11	1011	* Shell Chamber Retainer
12	1012	Index Button

* Not available as replacement parts.

DRAWING #	PART #	DESCRIPTION
13	1013	Shell Gate
14	1014	Interlock Pin
15	1015	* Head Insert
16	1016	Gripper Teeth
17	1017	* End Cap Pin
18	1018	* Shell Chamber Lid
19	1019	* Shell Chamber Cap
20	1020	* Rod Bushing
21	1021	* End Cap Nyloc Nut
22	1022	Shell Gate Spring
23	1023	Retainer Sleeve
24	1024	Index Button Spring
25	1025	Gripper Teeth Screws
26	1026	Shell Chamber Retainer and Injector Head Screws
27	1027	Gripper Teeth Lock Washers
28	1028	Injector Head Bushing

* Not available as replacement parts.

Filling The EZ-Ject ™ Lance

1. Stand the lance in an upright position with the injector head (#3) downward.
2. Unscrew the end cap (#9) counter-clockwise to expose the shell chamber lid (#18).
3. Slide the lid over to one side to expose the shell chamber openings.
4. Each end of a tube of herbicide shells has a cap. The black cap is the bottom; the colored cap is the top. Remove the colored cap from the top of one tube of EZ-Ject Herbicide Shells. Place the open end of the tube onto one of the four shell chamber openings. Tilt the tube to empty the herbicide shells into the chamber. **Ensure shells are loaded open end first.** If shells are loaded backwards, they can jam the lance. Each shell chamber in the standard size EZ-Ject Lance will hold approximately four full tubes of shells.

- *The standard EZ-Ject Lance has a capacity of 400 shells, 100 in each of four shell chambers.*
- *The short EZ-Ject Lance holds 228 shells, 57 in each shell chamber.*

5. When filling each shell chamber, notice that the openings are numbered one through four. These correspond with numbers of each index hole on the injector head (#3). When the index button (#12) is engaged in any one hole, that number corresponds to the chamber from which shells will be dispensed.
6. When all four chambers are full, simply slide the lid over to cover the openings, replace and tighten the end cap.
7. The lance is now ready for use.
8. As the shells are emptied from each shell chamber, depress the index button (#12) to select the next full chamber.
9. Remove shells from lance after use. ***Do not store*** **the lance for more than six hours with herbicide shells in the chambers.** If the lance must be stored briefly with shells loaded, **always store with the injector nose *upward*.** This orientation minimizes the possibility for herbicide to seep from the shells.

Timing of injections

Use year-around, unless bark is frozen to the point of preventing shell penetration. Use in all weather conditions, including rain.

Operating The EZ-Ject ™ Lance

1. Due to the fact that the lance is gravity fed, it should be used angled downward at 30 to 45 degrees from the horizontal position. The shells will only gravity feed into the head when the lance is tilted downward 30 to 45 degrees.
2. Ensure that the index button (#12) on the head (#3) is pointing in an upward position. If the index button is not in an upward position, the lance can jam.
3. The most comfortable position for holding the lance is usually gripping the rounded end cap (#9) with the right hand, and the left hand supporting the lance, approximately 18" down the handle (#1). (Reverse for a left-handed person).

4. To inject a shell, position the lance nose piece onto the tree trunk so that the gripper teeth (#16) penetrate the bark and prevent the lance from sliding down the vertical surface. Then firmly push the lance on the tree. The pushing action will compress the lance and inject a herbicide shell into the tree. Ensure the shell has penetrated into the tree cambium. Generally, at least 1/2 of the shell should be embedded into the tree.
5. Implant the recommended number of EZ-Ject shells so that they are placed evenly around the circumference of the trunk. This will ensure that the herbicide is well distributed in the target tree to provide the best possible control. Do not implant directly above one another.
6. In the event that the lance does not fully compress, check that the index button (#12) is upward. An interlock pin (#14), built into the injector nose (#2), prevents injection when the index button is not upward or when the lance is not correctly angled to gravity feed the shells.

Do not continue to apply excessive force on the interlock pin if the lance is improperly oriented, as this will bend the pin and prevent proper functioning of the lance.

Application rate— Please refer to chemical label.

Storage and Maintenance

Storage: *Do not store* the lance for more than six hours with herbicide shells in the shell chambers. If the lance must be stored briefly with shells loaded, **always store with the injector nose *upward*.** This orientation minimizes the possibility for herbicide to seep from the shells.

Maintenance: All components are made of corrosive-resistant materials that require minimal maintenance. However, it is recommended that the lance be thoroughly cleaned after each use to ensure efficient operation.

On a regular basis, clean the lance by submerging the injector head (#3) down in a pail of warm water, one to two hours. This will dissolve any deposits that may be present on the interior surfaces of the head.

The shell chambers (#4) may be flushed out after prolonged use. This is done by placing the head into an empty water pail, removing the end cap (#9) and flushing out each shell chamber with a water hose. To ensure each chamber is completely flushed, rotate the injector nose (#2) through its four positions. If it is necessary to dismantle the lance, refer to the EZ-Ject Parts Chart and the following instructions:

1. To remove the injector nose (#2), depress the index button (#12) and retract it from the head (#3). This procedure may also be used in the event of a jam. Pushing a screwdriver through the center hole from either end can then clear the nose.
2. To clean the injector nose (#2), swish in a pail of warm water to dissolve any residues that may be present on the interior surface of the center profiled hole. Ensure that the shell gates (#13) are opening consistently by pushing a 1/4" diameter rod through the hole. Considerable resistance should be felt when the gates are operating properly.
3. Gripper teeth (#16) are fastened to the injector nose. These can be replaced when necessary by removing the two screws and replacing with new teeth.

Service and Parts

EZ-Ject has been designed with a minimum of parts to allow for ease of maintenance and repair.

Most of the service and repair functions required, including parts replacement, may be very simply performed by you.

However, if you require service assistance or wish to order a part, please contact your distributor.

Trouble Shooting

Jamming: May occur when the lance will not complete a full stroke, or return to its extended position. Here are some instances when the lance could jam:

- A shell may fall only partly into the injector nose, possibly when the gripper teeth (#16) slip off the tree surface. This may result in only half a stroke and could cause the lance to jam. To clear a jam, use the procedure described in Step 1 of the Storage and Maintenance section.
- The lance may seem jammed if improperly oriented during operation. Ensure that the lance is correctly oriented with the index button upward. The interlock pin will prevent injection if the lance is operated with the index button downward. Do not operate in the improper orientation as this can bend the interlock pin.

Misfire: Occurs when the lance completes a full stroke but no shell is ejected. Use these suggestions to avoid a misfire:

- Ensure the injector nose (#2) is not aligned with an empty shell chamber (#4). If this is found to be the problem, rotate the nose to the next loaded chamber.
- Ensure the herbicide shells are not sticking in the injector nose (#2) due to excessive deposits on the interior walls. Wash the injector nose in a pail of warm water if this is the problem.
- Ensure there are sufficient shells in the lance and that the lance is correctly oriented when operating.

For additional service assistance, contact your distributor or call us toll free at:

1-888-395-6732

www.ezject.com

EZ-Ject Inc.
P.O. Box 34645 - Omaha, NE 68134-0645
10168 L Street - Omaha, NE 68127-1120

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7. The lance is now ready for use.
8. As the shells are emptied from each shell chamber, depress the index button (#12) to select the next full chamber.
9. **Remove shells from lance after use. Do not store the lance for more than six hours with herbicide shells in the chambers.** If the lance must be stored briefly with shells loaded, **always store with the injector nose upward.** This orientation minimizes the possibility for herbicide to seep from the shells.

The standard EZ-Ject Lance has a capacity of 400 shells, 100 in each of four shell chambers.

The short EZ-Ject Lance holds 228 shells, 57 in each shell chamber.

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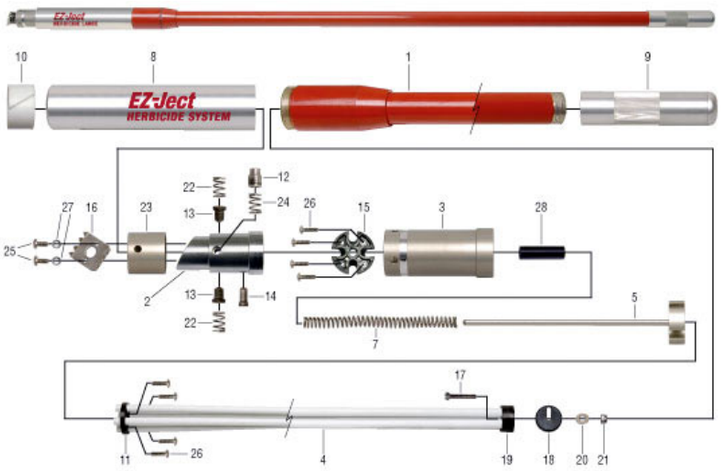

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EZ-Ject™
HERBICIDE SYSTEM

The fastest, easiest way to selectively control trees, stumps, woody brush, and invasive plants

Foresters, agricultural producers, and land/ROW managers now have an efficient, effective, economical way to control unwanted woody vegetation. With one simple movement, the spring-loaded EZ-Ject injects a herbicide shell into the base of a tree, stump, or brush. The herbicide is absorbed by the tree, effectively killing roots, trunk, and foliage.

EZ-Ject Herbicide Lance

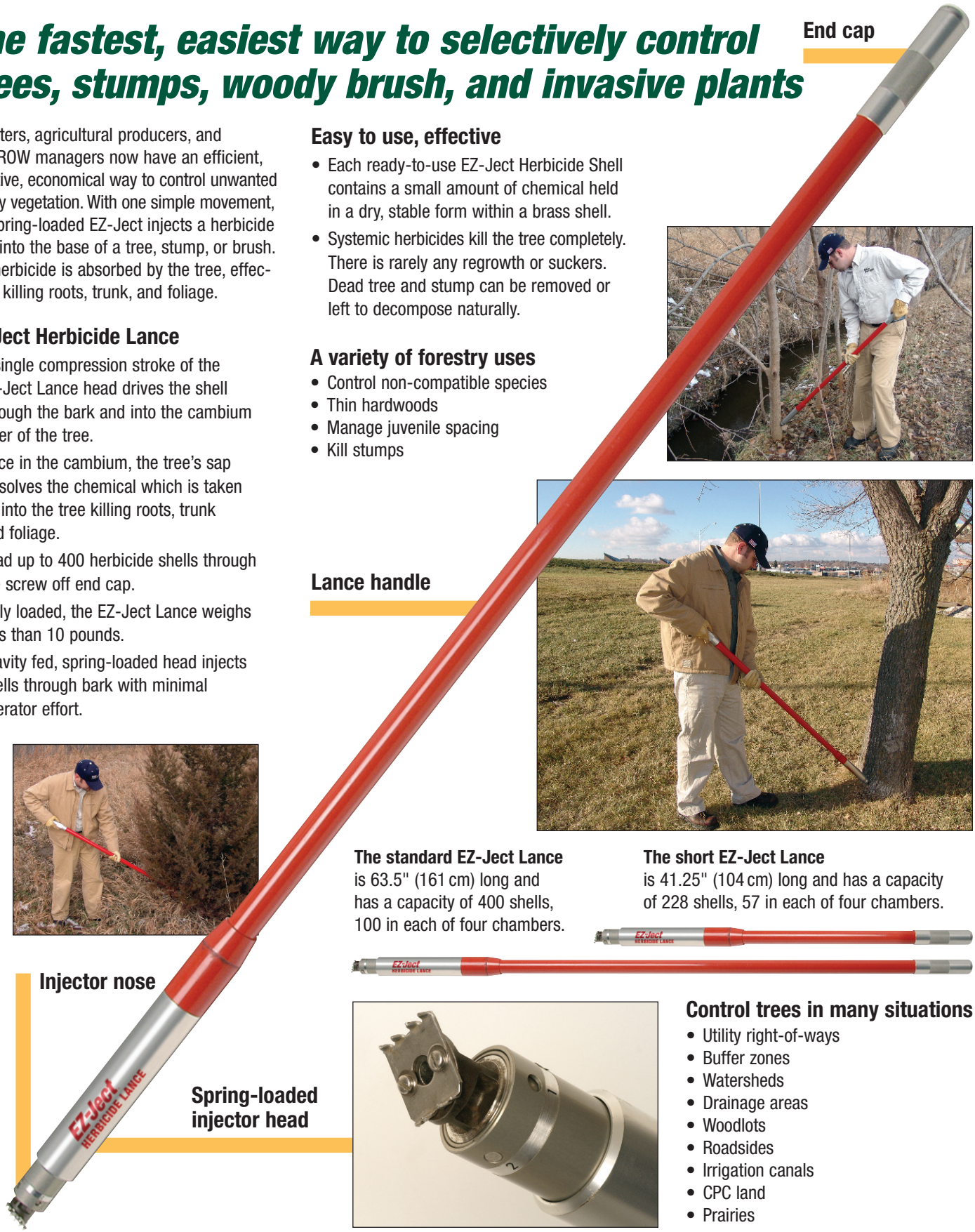
- A single compression stroke of the EZ-Ject Lance head drives the shell through the bark and into the cambium layer of the tree.
- Once in the cambium, the tree's sap dissolves the chemical which is taken up into the tree killing roots, trunk and foliage.
- Load up to 400 herbicide shells through the screw off end cap.
- Fully loaded, the EZ-Ject Lance weighs less than 10 pounds.
- Gravity fed, spring-loaded head injects shells through bark with minimal operator effort.

Easy to use, effective

- Each ready-to-use EZ-Ject Herbicide Shell contains a small amount of chemical held in a dry, stable form within a brass shell.
- Systemic herbicides kill the tree completely. There is rarely any regrowth or suckers. Dead tree and stump can be removed or left to decompose naturally.

A variety of forestry uses

- Control non-compatible species
- Thin hardwoods
- Manage juvenile spacing
- Kill stumps



The standard EZ-Ject Lance is 63.5" (161 cm) long and has a capacity of 400 shells, 100 in each of four chambers.

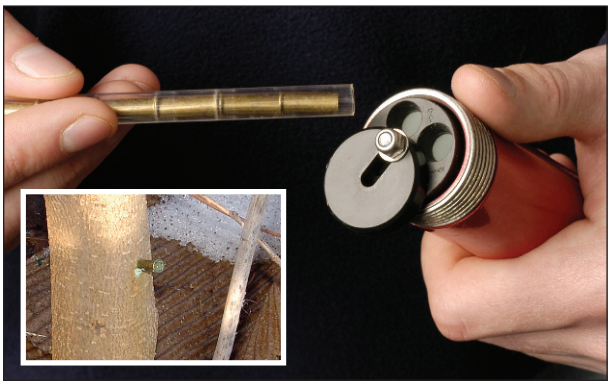
The short EZ-Ject Lance is 41.25" (104 cm) long and has a capacity of 228 shells, 57 in each of four chambers.

Control trees in many situations

- Utility right-of-ways
- Buffer zones
- Watersheds
- Drainage areas
- Woodlots
- Roadsides
- Irrigation canals
- CPC land
- Prairies

EZ-Ject™
HERBICIDE SYSTEM

Find out more at www.EZJect.com
888-395-6732



Simply load shells into lance end, screw on end cap, and begin injecting. Lance shaft contains four chambers into which shells are loaded. Fully loaded, the lance weighs less than ten pounds.

Herbicide shells are packaged 25 to a tube with 48 tubes contained in each 1200 shell box.

Tree and brush varieties controlled
EZ-Ject Herbicide Shells control dozens of varieties of trees and woody vegetation.

Timing of injections
Use year-around, unless bark is frozen to the point of preventing shell penetration. Use in all weather conditions, including rain.

Application rate
Insert one shell every two to three inches around the circumference of the tree.

Applicator benefits
- Lightweight, simple to use, less fatigue.
- Easy loading, worry-free operation
- Easy to use in overgrown or difficult-to-reach areas.
- Ideal for densely grown conifers.
- No chemical mixing, measuring, or spraying.
- Safer than chain saws—no blades, flying debris, fumes, or noise.
- Minimal training, worry-free operation.
- Work in any weather.

Forest and crop tree benefits
- Selectively kill undesirable trees.
- No off-target herbicide effects.
- Because treated trees die slowly, slower canopy opening allows crop trees to adapt.
- No disease transmission.
- Less fire hazard than mechanical options.

Environmental benefits
- Manage vegetation in sensitive sites without drift or spill risks.
- Thin stands without felling. No slash to impede wildlife movement.
- Create wildlife habitat trees, such as snags for perching birds.
- Retain beneficial foraging vegetation while controlling unwanted trees and brush.

ArborSystems™
Tree Injection Solutions

Diamondback™ Herbicide Shells

Active ingredient: Glyphosate

Diamondback controls:
- Alder
- Ash
- Aspen, quaking
- Bigleaf maple
- Birch
- Black cherry
- Cascara
- Ceanothus
- Chamise
- Cherry
- Cottonwood
- Dogwood
- Douglas fir
- Elderberry
- Elm
- Eucalyptus
- Hackberry
- Hawthorn
- Hazel
- Hemlock
- Hickory
- Locust, honey
- Lodgepole pine
- Madron
- Manzanita
- Maple
- Mountain maple
- Oak
- Persimmon
- Pin cherry
- Poison ivy
- Poison oak
- Ponderosa pine
- Poplar
- Poplar, yellow
- Redbud
- Sagebrush
- Sassafras
- Sourwood
- Sumac
- Sweetgum
- Tan oak
- Vine maple
- Waxmyrtle
- Western red cedar
- Willow

Copperhead™ Herbicide Shells

Active ingredient: Imazapyr

Copperhead controls:

Woody Brush and Trees
- Alder
- American beech
- Ash
- Aspen
- Autumn olive
- Bald cypress
- Bigleaf maple
- Birch
- Black oak
- Blackgum
- Blueberry
- Boxelder
- Brazilian peppertree
- Ceanothis
- Cherry
- Chinaberry
- Chinese tallow-tree
- Chinquapin
- Cottonwood
- Cypress
- Dogwood
- Eucalyptus
- Fetterbrush
- Hawthorn
- Hickory
- Huckleberry
- Madrone
- Maple
- Melaleuca
- Mulberry
- Oak
- Persimmon
- Poison oak
- Popcorn-tree
- Poplar
- Privet
- Red alder
- Red maple
- Saltcedar
- Sassafras
- Sourwood
- Sparkleberry
- Staggerbrush
- Sumac
- Sweetgum
- Sycamore
- Tanoak
- TiTi
- Tree of heaven
- Willow
- Yellow poplar

Vines
- Honeysuckle
- Morning glory
- Redvine
- Trumpet creeper
- Virginia creeper
- Wild grape
- Wild rose, including Multiflora rose Macartney rose

EZ-JECT™ Copperhead Herbicide Shells | Specimen Label

ArborSystems™ Direct-Inject™ Chemical

Water-Soluble Herbicide in Shells for Trunk and Stem Injection
Controls Undesirable Woody Brush, Trees and Vines – Roots and All

ACTIVE INGREDIENT:

Imazapyr	83.5%
OTHER INGREDIENTS	16.5%
Total:	100.0%

Net Contents	Shell Net Weight	Total Net Weight
1200 Shells	0.03 ounce (0.95 g)	2.25 lbs. (1kg)

EPA Reg. No. 83220-2 **EPA Est. 69117-NE-1**

Keep Out of Reach of Children

CAUTION

See below for additional Precautionary Statements.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

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

FIRST AID

If in Eyes: Immediately flush with plenty of water. Get medical attention if irritation persists. Remove product from skin or clothing.
If Swallowed: Immediately induce vomiting as directed by medical personnel.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, shoes plus socks. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

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.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product is recommended for woody brush, tree and vine control in all non-cropland sites including forestry, roadsides, rights-of-way, industrial, residential, fencerows, railroads and aquatic sites. Woody vegetation may be controlled by injection of EZ-Ject Copperhead Herbicide Shells.

This product moves throughout the tree from the point of injection to all roots and shoots. Symptoms appear gradually (normally within 2 to 4 weeks) beginning with wilting, yellowing and browning of the foliage. This is followed by deterioration of all roots and shoots.

For aquatic sites, this product may be injected into stems of trees and brush standing in water or wetlands. Do not apply directly to water or inject into stems below the water level.

Inject the shells using only the EZ-Ject shell injection equipment. The shells must penetrate through the outer bark into living phloem tissue to provide effective results. For trees with less than 2.5 inch DBH (diameter at breast height), inject one shell per stem. Inject one shell every 4 inches, evenly around the trunk of the tree, below all major branches. Tree may be injected at any time of the year except when wood is frozen.

This product will control the following species:

- American beech (*Fagus grandifolia*)
- Ash (*Fraxinus* spp.)
- Aspen (*Populus* spp.)
- Bald cypress (*Taxodium distichum*)
- Bigleaf maple (*Acer macrophyllum*)
- Blackgum (*Nyssa sylvatica*)
- Boxelder (*Acer negundo*)
- Cherry (*Prunus* spp.)
- Chinaberry (*Melia azedarach*)
- Chinese tallow-tree (*Sapium sebiferum*)
- Dogwood (*Cornus* spp.)
- Hawthorn (*Crataegus* spp.)
- Hickory (*Carya* spp.)
- Maple (*Acer* spp.)
- Mulberry (*Morus* spp.)
- Oak (*Quercus* spp.)
- Persimmon (*Diospyros virginiana*)
- Poplar (*Populus* spp.)
- Privet (*Ligustrum vulgare*)
- Red alder (*Alnus rubra*)
- Red maple (*Acer rubrum*)
- Sassafras (*Sassafras albidum*)
- Sourwood (*Oxydendrum arboretum*)
- Sumac (*Rhus* spp.)
- Sweetgum (*Liquidambar styraciflua*)
- Willow (*Salix* spp.)
- Yellow poplar (*Linodendron tulipifera*)

SPECIMEN

STORAGE AND DISPOSAL

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 re-seal.

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: Triple rinse (or equivalent) 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.

For additional product information, call 1-888-395-6732

LIMIT OF WARRANTY AND LIABILITY

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use ("Directions") when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein. Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

The exclusive remedy of the user or buyer, and the limit of the liability of this company or any other seller for any and all losses, injuries or damages resulting from the use or handling of this product (including claims based in contract, negligence, strict liability, other tort or otherwise) shall be the purchase price paid by the user or buyer for the quantity of this product involved, or at the election of the company or any other seller, the replacement of such quantity, or if not acquired by purchase, replacement of such quantity. In no event shall this company or any other seller be liable for any incidental, consequential or special damages.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

EZ-Ject™ is a trademark of EZ-Ject, Inc.

Sold by

EZ-Ject, Inc.™

P.O. Box 34645 • Omaha, NE 68134
Toll Free: 1-888-395-6732

SPECIMEN

EZ-JECT™ Copperhead® Herbicide Shells

Safety Data Sheet

EZ-Ject™ P.O. Box 34645 • Omaha, NE 68134 • Toll-Free: 899-698-4641 • Phone: 402-339-4459 • Fax: 402-339-5011 • www.ArborSystems.com

1. IDENTIFICATION

PRODUCT: EZ-Ject™ Copperhead® Herbicide Shells
EPA Reg. No.: 83220-2
EPA Est: 69117-NE-1

2. HAZARD(S) IDENTIFICATION

WARNING

EMERGENCY OVERVIEW:
Potential health hazards:
See Product Label for additional precautionary statements.
Primary routes of exposure: Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact.
Acute toxicity: Relatively nontoxic after single ingestion. Slightly toxic after short-term skin contact. Relatively nontoxic after short-term inhalation.
Irritation: May cause slight but temporary irritation to the eyes. May cause slight irritation to the skin.
Sensitization: Skin sensitizing effects were not observed in animal studies. Repeated dose toxicity: No other known chronic effects.
Aquatic toxicity: There is a high probability that the product is not acutely harmful to fish. There is a high probability that the product is not acutely harmful to aquatic invertebrates. Acutely harmful for aquatic plants.
Terrestrial toxicity: With high probability not acutely harmful to terrestrial organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

ACTIVE INGREDIENT:
Isopropylamine salt of Imazapyr
(2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1*H*-imidazol-2-yl]-3-pyridinecarboxylic acid)*. 83.5%
OTHER INGREDIENTS. 16.5%
Total 100.0%

* Equivalent to 0.008 ounces (0.23 grams) per shell of Isopropylamine salt of Imazapyr or 0.006 ounces (0.18 grams) of Imazapyr Acid.

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 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: Immediately call a poison control center or doctor for treatment advice. 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 on Skin or Clothing: Take off contaminated clothing. Immediately rinse skin with plenty of water for 15-20 minutes.
Note to physician:
Antidote: No known specific antidote.
Treatment: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point: > 210°F
Autoignition: approximately 200°F
Suitable extinguishing media: Foam, dry extinguishing media, Carbon dioxide, water spray.
Hazards during fire-fighting: Carbon monoxide, Carbon dioxide, Nitrogen oxide. If product is heated above decomposition temperature, toxic vapors will be released. The substances/groups of substances mentioned can be released if the product is involved in a fire.
Protective equipment for fire-fighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
Further information: Evacuate area of all unnecessary personnel. Contain contaminated water/fire-fighting water. Do not allow to enter drains or waterways.

NFPA Hazard codes:
Health: 1 Fire: 1 Reactivity: 0 Special:

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.
Environmental precautions: Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/fire-fighting water.
Cleanup: Dike spillage: pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. HANDLING AND STORAGE

Handling:
General advice: RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. Ensure adequate ventilation. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect contents from the effects of light. Protect against heat. Protect from air. Handle an open container with care. Do not open until ready to use. Once container is opened, content should be used up as soon as possible. Avoid aerosol formation. Avoid dust formation. Provide means for controlling leaks and spills. Do not return residues to the storage containers. Follow label warnings even after container is emptied. The substance/product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/ product. Avoid contact with the skin, eyes, and clothing. Avoid inhalation of dusts/mists/vapors. Wear suitable personal protective clothing and equipment.
Protection against fire and explosion: The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, and open flame. Keep away from oxidizable substances. Electrical equipment should conform to national electric code. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.
Storage:
General advice: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.
Storage incompatibility: General: Segregate from incompatible substances. Segregate from foods and animal feeds. Segregate from textiles and similar materials.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.
Advice on system design: Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.
Personal protective equipment:
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:
Respiratory protection: Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) TC23C Chemical/Mechanical type filter system to remove a combination of particles, gas and vapors. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH certified full face piece pressure demand self-contained breathing apparatus (SCBA) or a full face piece pressure demand supplied-air respirator (SAR) with escape provisions.
Hand protection: Chemical resistant protective gloves. Protective glove selection must be based on the user's assessment of the workplace hazards.
Eye protection: Safety glasses with side-shields (frame goggles) (f.e. EN 166)
Body protection: Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.
General safety and hygiene measures: Wear long-sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Personal protective equipment should be decontaminated prior to reuse. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately all contaminated clothing. Store work clothing separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Crystals/solid
Odor: Strong, ammonia-like
Color: Green
pH value: 5.5 - 7.5
Boiling point: Approximately 212°F (760 mmHg)
Density: 1.11 - 1.12 g/cm3

10. STABILITY AND REACTIVITY

Conditions to avoid: Avoid all sources of ignition: heat, sparks, and open flame. Avoid extreme temperatures. Avoid prolonged exposure to extreme heat. Avoid contamination. Avoid electrostatic discharge. Avoid prolonged storage.
Substances to avoid: Oxidizing agents, strong alkalies.
Hazardous reactions: This product is chemically stable. Hazardous polymerization will not occur. No hazardous reactions if stored and handled as prescribed/indicated.
Decomposition products: Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated. Prolonged thermal loading can result in products of degradation being given off.
Thermal decomposition: Possible thermal decomposition products: carbon monoxide, carbon dioxide, Nitrogen oxide. Stable at ambient temperature. If product is heated above decomposition temperature, toxic vapors may be released. If product is heated above decomposition temperatures, hazardous fumes may be released.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:
Oral: LD_{50}/rat: > 5,000 mg/kg. Slightly toxic to practically nontoxic.
Inhalation: LC_{50}/rat/male/female: 4.62 mg/L/4h
Dermal: LD_{50}/rabbit: > 5,000 mg/kg. Slightly toxic.
Skin irritation: Rabbit: Mildly irritating. (Primary skin irritation test)
Eye irritation: Rabbit: Nonirritating.
Genetic toxicity: Information on: imazapyr - No mutagenic effect was found in various tests with microorganisms and mammals.
Carcinogenicity: Information on: imazapyr -In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.
Reproductive toxicity: Information on: imazapyr - The results of animal studies gave no indication of a fertility impairing effect.
Developmental toxicity/teratogenicity: Information on: imazapyr - No indications of a developmental toxic/teratogenic effect were seen in animal studies.

12. ECOLOGICAL INFORMATION (NON-MANDATORY)

Information on: imazapyr
Environmental toxicity:
Acute and prolonged toxicity to fish: Rainbow trout/LC50 (96 h): > 100 mg/L
Acute toxicity to aquatic invertebrates: Daphnia magna/EC50 (48 h): > 100 mg/L
Toxicity to aquatic plants: Green algae/EC50: 71 mg/L
Other terrestrial non-mammals: Mallard duck/LC_{50}: > 5,000 ppm.
With high probability, not acutely harmful to terrestrial organisms.
Honey bee/LD50: > 100 ug/bee
With high probability, not acutely harmful to terrestrial organisms.

Other ecotoxicological advice: Do not discharge product into the environment without control. No data available for the preparation. The ecological data given are those of the active ingredient.

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, 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 the EZ-Ject injection system. Replace unused shells in original container and reseal. Always store the product with the open end of the capsule facing UP.
Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on-site by using according to “Directions for Use” on this label, or at an approved waste disposal facility.
Container Disposal: Non-refillable container; do not reuse or refill container. Offer for recycling if available; alternatively, dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

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

Federal Regulations:
FIFRA Information: Signal Word: Caution
Precautionary Statements: Harmful if swallowed.
Registration status:
TSCA, US: released/exempt
OSHA Hazard Category: Chronic target organ effects reported, Acute target organ effects reported, ACGIH TLV established, Toxic – inhalation
SARA Hazard Categories: (EPCRA 311/312): Acute

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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Revised: 07/2015
Previous Revised: 05/2014

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