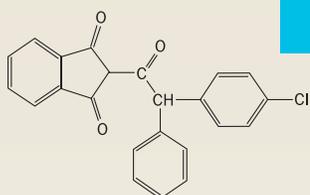




Rozol® Technical Bulletin for Management of Mountain Beavers in Forestry Plantations



Chemical Name and Structure of Active Ingredient (a.i.)

Chlorophacinone (CPN)
2-((2-(4-chlorophenyl)-1-oxo-2-phenyl) ethyl) -1H-indene-1,3-(2H)-dione
Molecule discovered and patented by Liphatech

CAS Number: 3691-35-8

Chemical Class: indandione anticoagulant

Use

Rozol® is a restricted use pesticide registered for use in western Oregon & Washington under 24(c) "Special Local Needs" labels. Rozol® with active ingredient Chlorophacinone (0.005%) is an effective anticoagulant rodenticide used for over 30 years against commensal and field rodents.

Rozol® Pellets for the management of mountain beavers, are for retail sale and use west of the crest of the Cascade Mountain Range. Rozol® Pellets are for use only by Certified Applicators or persons under their direct supervision and for those uses covered by the Certified Applicator's certificate.

Formulated as weather-resistant paraffinized pellets, Rozol® holds up to wet conditions before and after snow pack, reducing the chances of tree girdling, stem and root damage, and production losses from mountain beavers.

Environmental Fate

Water Solubility: Low water solubility¹ - 0.013 g/L at 20°C (+/- 5)
Fairly nonreactive in water² - pH 7 buffer: 0.3446 g/L
pH 10 buffer: 0.459 g/L

Chlorophacinone (CPN) baits typically retain the parent compound CPN even after exposure to wet weather and moisture.³

Aerobic Soil Metabolism:

- CPN is hardly mobile in the environment based on 4 batch equilibrium studies in four soil types.⁴
- Due to chlorophacinone's limited mobility in soil, it is relatively immobile within bait formulations.⁵
- Movement in the environment will be minimal while CPN is still absorbed in the bait or on eroded sediment.⁵

Hydrolysis² (30 days):

pH 5: CPN was 96% of the applied rate. Degradation: 7.7 mos. (232 days)
pH 7: CPN was 84-86% of the applied rate. No evidence of degradation
pH 9: CPN was 68-81% of the applied rate. No evidence of degradation

- Moderately persistent in the soil: aerobic soil metabolism half-lives on the order of weeks.⁴
- In soil, CPN degraded to 64% CO₂ @70 days⁴
- The toxic structure of the original CPN molecule is no longer present in the degradate.⁵

Rozol® Pellets for the Management of Mountain Beavers

% a.i.: 0.005% or 50 ppm Chlorophacinone

Bulk Density: 44 lbs./cubic foot (0.71 g/ml)

EPA Reg. No. 7173-151 EPA SLN NO. OR-060026 WA-060019

Type/Appearance:

Beige, 3/16" diameter (4.7mm) pellet. Limited dust.
Approximately 1,860 bait pellets per 12 oz. burrow-pack.

Storage Recommendation

Store tightly-closed manufacturer's container in a cool, dry place inaccessible to children, pets, livestock and non-target animals.

Personal Protection Requirements (PPE) (see Label & SDS for complete details)

Beyond waterproof gloves and long pants, no special requirements such as respirators are required when this product is used according to label instructions.

References: ¹MRID 46027608, ²EPA CPN RED p.75 MRID 42205501, ³Merson and Byers 1985, ⁴MRID 43159801, ⁵EPA CPN Registration Review, Environmental Fate, 12/2015 pp. 13-14. The EPA does not endorse any pesticide product.



80 pails per pallet

8009-4 (10/3/18)



The Need for Mountain Beaver Management

Mountain beavers have damaged over 300,000 acres in the Cascade Range, and impact tree seedling survival up to 20 years after planting.



Reduce basal bark stripping & root feeding



Reduce girdling



Reduce clipping

Rozol® Your Solution for Managing Mountain Beavers (Boomers)

Reduce seedling mortality and tree loss.

Manages multiple mountain beavers per burrow-pack.

Paraffinized pellets ensure long field life.



Packaging: Rozol® Pellets for the management of mountain beavers are packaged in an 18 lb. pail, containing twenty-four, individually-labeled 12 ounce burrow-packs.

Applicator does not touch the product. Convenient “chew-through” burrow-packs are opened by mountain beaver.

Re-sealable weatherproof pails keep bait dry and minimize accidental exposure.

Eighty (80) pails per pallet.

Biology:

- Boomers begin foraging as early as 2 months after birth.
- Boomers home ranges are from 2-10 acres.
- Boomers migrate and reinvade.



LIPHATECH®

For more information, call (888) 331-7900
or visit our Web site at www.liphatech.com

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at the time of application. Follow all applicable directions, restrictions and precautions on the main EPA registered label and this label.

This product can be used for forestry sites, including conifer site preparation areas. Not for use in recreational sites, Christmas tree plantations or in ornamental plantings.

GENERAL INFORMATION

Mountain beavers (*Aplodontia rufa*) are active for short durations throughout the day, but are usually more active in the evening. Surface activity is usually fairly close to their burrows, although they can range over several acres if food is not plentiful. Mountain beaver burrows can be located by observing feeder holes or freshly pushed dirt. There may be several entrances to the mountain beaver burrow system. Mountain beavers exhibit caching and hoarding behavior and are likely to move the bait packet into their burrow. Abandoned burrows are frequently reinvaded by mountain beavers from surrounding areas, and cached bait may control invading animals. Population monitoring, trapping and baiting are components of an Integrated Pest Management (IPM) approach to mountain beaver control. Research has found that trapping in conjunction with baiting is the most effective method of control.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to mammals, birds, fish and aquatic invertebrates. Predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have been poisoned by the product. Collect and properly dispose of dead animals. 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 when disposing of equipment washwaters or rinsate.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage: Store in original container in a cool, dry place inaccessible to children and pets.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Dispose of empty container in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

RESTRICTED USE PESTICIDE

DUE TO TOXICITY TO NONTARGET ORGANISMS

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

FIFRA Special Local Need Label

This label must be in the possession of the user at the time of pesticide application. Follow all other applicable directions, restrictions and precautions on the EPA registered label.

**FOR DISTRIBUTION AND USE ONLY
WITHIN THE STATE OF OREGON
(West of the Crest of the Cascade Mountain Range)**

This label valid until December 31, 2021 or until otherwise amended, withdrawn, canceled or suspended.

rozol[®] PELLETS

FOR CONTROL OF MOUNTAIN BEAVER IN FORESTRY PLANTATIONS

Active Ingredient: chlorophacinone 0.005%
Inert Ingredients 99.995%
Total 100.000%

EPA Reg. No. 7173-151

EPA Est. No. 7173-WI-01

EPA SLN No. OR-060026

KEEP OUT OF REACH OF CHILDREN

CAUTION: See side panel for further cautions and first aid instructions.

24(c) Registrant:

LIPHA[®]TECH

Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209
800-351-1476

Net Weight:

18 lbs (8.8 Kg) (24 x 12 oz. packs)

USE RATE /BAIT PLACEMENT

Place one unopened packet of bait inside a feeder hole or runway of an active mountain beaver burrow system. Do not place more than one packet per hole or individual runway; or more than two packets of bait per burrow system. Insert bait packet at least 12 inches into hole or runway. Do not cut or tear open the packets of bait.

Application Timing:

Applications made between October and February have been found to be most effective at reducing damage to tree seedlings planted in late winter or early spring. Applications should be made to target the adult mountain beaver population. Juvenile mountain beavers are more commonly present during the summer months. They are smaller, more naive, and tend to be more active outside of the burrow. To minimize risks to non-target predators and scavengers, do not apply bait from mid-May to September 1. Do not apply more than once per season.

RESTRICTIONS / PRECAUTIONS

Do not apply this product in a way that will contact workers or other persons. Only protected handlers may be in the area during application.

Do not apply to any site, against any pest, or by any method of application not stated on this label.

For use to control mountain beavers only. Use of Rozol under this Special Local Need (SLN) label is restricted to western Oregon only (West of the crest of the Cascade Mountain Range).

Do not apply this product from mid-May to September 1 when juvenile mountain beavers are present, due to concerns with secondary poisoning of non-target animals. This pesticide is toxic to fish and wildlife. Rozol Pellets should not be used under this SLN label where impact on listed threatened or endangered species is likely. You may contact the Oregon Department of Fish & Wildlife, National Marine Fisheries Service (NOAA Fisheries) or US Fish & Wildlife Service (503-231-6179) for information regarding species listed as threatened or endangered.

Consult the Federal label for additional restrictions and precautions to protect fish and wildlife and other non-target organisms.

Do not apply this product directly to water or within 10 feet of surface water (i.e. streams, rivers, lakes).

Pick up and properly dispose of any spilled bait that cannot be recovered for use.

Keep away from humans, domestic animals and pets during application, handling and storage.

Revised 12/20/2016

RESTRICTED USE PESTICIDE

DUE TO POTENTIAL SECONDARY TOXICITY TO NONTARGET ORGANISMS

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

Section 24(c) Special Local Need Label

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF WASHINGTON

rozol[®] Pellets

FOR CONTROL OF MOUNTAIN BEAVER IN FOREST PLANTATIONS

EPA SLN No. WA-060019

EPA Reg. No. 7173-151

This label for Rozol Pellets expires and must not be distributed or used in accordance with this SLN registration after December 31, 2019.

- It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
- This labeling must be in the possession of the user at the time of application.
- Follow all applicable directions, restrictions and precautions on the EPA registered label.
- This product can be used for forestry sites, including conifer site preparation areas.
- Not for use on recreational sites, Christmas tree plantations or in ornamental plantings.

General Information: Mountain beavers (*Aplodontia rufa*) are active for short durations throughout the day, but are usually more active in the evening. Surface activity is usually fairly close to their burrows, although they can range over several acres if food is not plentiful. Mountain beaver burrows can be located by observing feeder holes or freshly pushed dirt. There may be several entrances to the mountain beaver burrow system. Mountain beavers exhibit caching and hoarding behavior and are likely to move the bait packet into their burrow. Abandoned burrows are frequently reinvaded by mountain beavers from surrounding areas, and cached bait may control invading animals. Baiting should be used as one component of an Integrated Pest Management (IPM) approach to mountain beaver control, including trapping and population monitoring. Research has found that trapping in conjunction with baiting is the most effective method of control.

DIRECTIONS FOR USE: Use Rate / Bait Placement: Do not tear open the packets of bait. Place one unopened packet of bait inside two feeder holes or active runways of each active mountain beaver burrow system (i.e. one packet per hole or runway, two packets per burrow system). Insert bait packets at least 12 inches into hole or runway.

Application Timing: Applications made between October and February have been found to be most effective at reducing damage to tree seedlings planted in late winter or early spring. Baiting from mid-May to mid-September when juvenile mountain beavers are present is not permitted, due to concerns with secondary poisoning of non-target animals. Do not apply more than once per season.

RESTRICTIONS / PRECAUTIONS:

- Do not apply this product from mid-May to mid-September when juvenile mountain beavers are present, due to concerns with secondary poisoning of non-target animals.
- Maximum Annual Application Rate is two bait packets per burrow system per year.
- For use in accordance with this SLN label do not apply this product through any type of irrigation system.
- Do not apply this product directly to water or within 10 feet of surface water (i.e. streams, rivers, lakes).
- Do not apply this product in a way that will contact workers or other persons. Only protected handlers may be in the area during application.
- For control of mountain beavers only.
- Use of Rozol for control of mountain beaver in forest plantations is limited to western Washington only. Do not apply this product to forest plantations located in eastern Washington.
- Do not broadcast bait. Do not apply this product by any method not specified on this label.
- Pick up and properly dispose of any spilled bait that cannot be recovered for use.
- Keep away from humans, domestic animals and pets during application, handling and storage.

This product is extremely toxic to mammals and birds. Rozol Pellets should not be used in accordance with this SLN label where impact on listed threatened or endangered species is likely. You may refer to the WSDA Natural Resources Assessment Section web site at <http://agr.wa.gov/PestFert/NatResources/EndangSpecies.aspx>, or contact the Washington Department of Fish & Wildlife, National Marine Fisheries Service (NOAA Fisheries) or US Fish & Wildlife Service (360-753-9440) for information regarding terrestrial and aquatic species listed as threatened or endangered. Consult the Federal label for additional restrictions and precautions to protect fish and wildlife.

Net Weight: 18 lbs (8.8 Kg) (24 x 12 oz. packs)

24(c) registrant:

Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209
(800) 351-1476

LIPHATECH[®]

Rev. 12/07/2016