

Douglas-fir and Spruce Beetle Repellent Treatment on Grassy Cone Stand, Craters of the Moon National Monument and Preserve 2019

From May 7-9, 2019 approximately 700 MCH (3-methyl-2-cyclohexen-1-one) bubble caps were applied to trees in the Grassy Cone stand. These trees had been almost entirely (80-100%) defoliated by the Douglas-fir Tussock moth in 2017-2018

Bubble caps were stapled as high up as the person could reach and to the north side (generally) of trees to limit sun exposure and prolong life of the packets. Bubble caps were spaced roughly 40 feet apart throughout the stand (as per direction from Chad Nelson – US Forest Service). Large live trees were sought as preferred targets but this was not always possible to maintain the 40' spacing. Packets were placed on limber pine when no Douglas-fir stems were available. Very large trees ($\geq 20''$ dbh) received 2 bubble caps for the first 1/3 of the project but when it became apparent that we would run out of packets this practice was halted. Trees which received 2 packets are all on the upper $\frac{1}{2}$ (approximately) of the slope. Bubble caps were stapled with the most visible side facing out to make retrieval of the packets easier at season's end.

Douglas-Fir and Spruce Beetle Repellent

MCH bubble cap₁

ACTIVE INGREDIENT:
3-methyl-2-cyclohexen-1-one.....97.9%
OTHER INGREDIENTS:.....2.1%
TOTAL:.....100.0%

*Each dispenser contains 392 mg of MCH

KEEP OUT OF REACH OF
CHILDREN
CAUTION

FIRST AID	
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 on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call poison control center or doctor immediately for treatment advice. • 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 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 treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-225-2883 for emergency medical treatment information.	

EPA Reg. No.: 239-2733
EPA Establishment No.: 239-CAN-002

Manufactured by: The Ortho Group
P.O. Box 190
Marysville, OH 43040
1-800-225-2883

Net Contents: 10 Bubble Caps
Batch/Lot Number:
2458249

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye and skin irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor. Avoid contact with contents of bubble cap. Do not puncture bubble cap. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS:

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark, except under forest canopy. Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Prior to use, open storage bag in a well ventilated area and allow any accumulated vapors to vent.

APPLICATION DIRECTIONS

Host Tree Stands: Standing and fallen Douglas-fir and Spruce trees and stumps, and stands containing significant numbers of Douglas-fir or Spruce trees. Use on trees in forests; municipal and shade tree areas; recreational areas such as campgrounds, golf courses, parks and parkways; ornamental and shade tree plantings; suburban areas; and rights of way and other easements.

Pests: MCH is an antiaggregation pheromone for (Pine) bark beetles such as the Douglas-Fir Beetle (*Dendroctonus pseudotsugae*) and the Spruce Beetle (*Dendroctonus rufipennis*). MCH Bubble Caps deter mass attack in tree stands and protect susceptible trees.

Application Rate

Placement on trees: Place bubble caps on trees over 8 inches in diameter on the north face of the tree at 6 to 12 feet in height with the bubble facing the tree surface and the flat side facing outwards. Staple at the top and do not puncture the centre of the bubble cap.

Individual trees: Place 1 or 2 bubble caps on each tree, the number depending on risk of attack. For large trees, add 1 more bubble cap for each additional 8 inches in diameter 3 feet above the previous bubble cap (e.g., a 16 inch diameter tree will have at least 2 bubble caps with 1 or 2 placed at 6 to 12 feet height and an additional 1 at 12 to 14 feet height).

Treed areas less than 2.5 acres: Place 1 or 2 bubble caps on all trees over 8 inches in diameter, the number of bubble caps depending on risk of attack.

Forested stands over 2.5 acres: Minimum dose - 40 bubble caps/acre (100 bubble caps/hectare). For low to moderate beetle pressure, place 1 bubble cap/tree in a grid pattern with 32 foot centers. Maximum dose - 80 bubble caps/acre. For high to extreme beetle pressure, place 1 bubble cap/tree in a grid pattern with 23 foot centers. For best results, remove and destroy all beetle-infested trees on the property before application.

Stumps and windthrown trees: Each stump or tree must be treated to prevent population build-up because stumps and windthrown trees are preferred hosts. Place 1 bubble cap on the north face of each stump. Place up to 6 bubble caps, depending on tree size, at 6 to 10 foot spacing on the shady side of the log.

Extensive windthrow: For large areas of windthrow (over 2.5 acres) where treating every tree is not feasible, place bubble caps in a grid pattern using the maximum dose of 80 bubble caps/acre on 23 foot centers.

Timing: Place in the field at least 2 weeks prior to the expected attack flight of the pest. The expected lifespan of each MCH bubble cap is 50 - 60 days, weather dependent. Use a second treatment as needed. Treatment is usually site-specific, depending on such factors as proximity, size and rate of growth of a natural infestation or other source of beetles (e.g., a sawmill), stand age and composition, aspect, elevation, latitude, climate, local weather and integration with other control tactics. Inexperienced users are advised to seek guidance from a professional forest entomologist.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in sealed storage bag in a cold, dry place.

Store below 32°F (0°C) or as cold as possible.

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

Container Disposal: Nonrefillable container. Do not reuse or refill empty bags. Place empty bag in trash.

NOTICE: To the extent consistent with applicable law, the buyer assumes all responsibility for safety and use not in accordance with directions.