

Verbenone: Mountain Pine Beetle Repellent

HOW IT WORKS

Contech's Mountain Pine Beetle Repellent contains the pheromone verbenone that prevents attacks by the mountain pine beetle on all varieties of pine trees. When present in sufficient concentration, verbenone signals incoming beetles that the target tree is too crowded to accommodate more beetles.

WHERE TO USE

Contech's Mountain Pine Beetle Repellent should be used on pine trees in:

- forests
- municipal and shade tree areas
- campgrounds
- golf courses
- parks and parkways
- ornamental and shade tree plantings
- neighborhoods
- residential properties
- ranches
- farms
- rights of way and other easements

WHEN TO USE

Deploy Contech's Mountain Pine Beetle Repellent when young adult beetles are first found under the bark, 2-3 weeks prior to beetle flight, usually May-June. Flight timing can vary with local weather, aspect (south facing is warmer) altitude and latitude. Consult a forest health professional to determine flight times in your area.

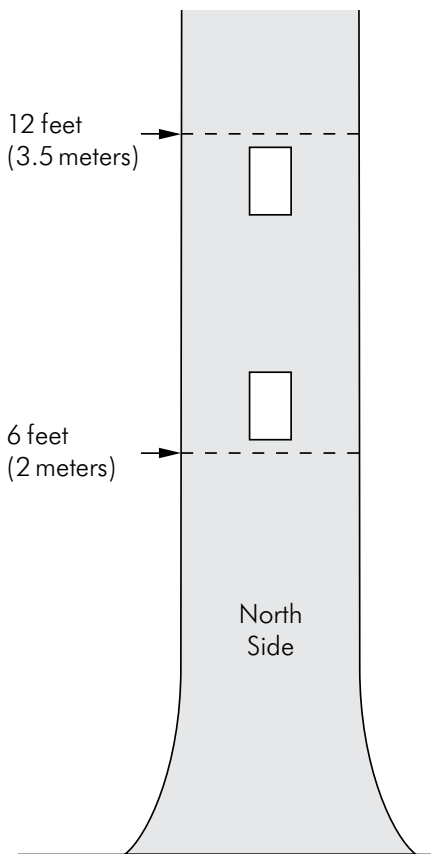
The expected lifespan of the Mountain Pine Beetle Repellent is 60 to 120 days, weather dependent. Use a second treatment as needed.



HOW TO USE

HOW TO USE (Individual and Small Groups of Trees)

1. Locate, fell and remove any infested trees prior to beetle flight.
2. 2-3 weeks prior to beetle flight, staple 2 verbenone pouches on the north face of each tree;
 - one at 6 feet (2 meters) above ground
 - one at 12 feet (3.5 meters) above ground
3. Place additional verbenone pouches at 4 to 5 yard (4-5 meter) intervals on vertical objects within 16.5 feet (5 meters) of the tree to be protected to create a surrounding ring of verbenone pouches.
4. **The expected lifespan of the verbenone pouches is 60 to 120 days, weather dependent. A second treatment of Verbenone in early August is highly recommended.**



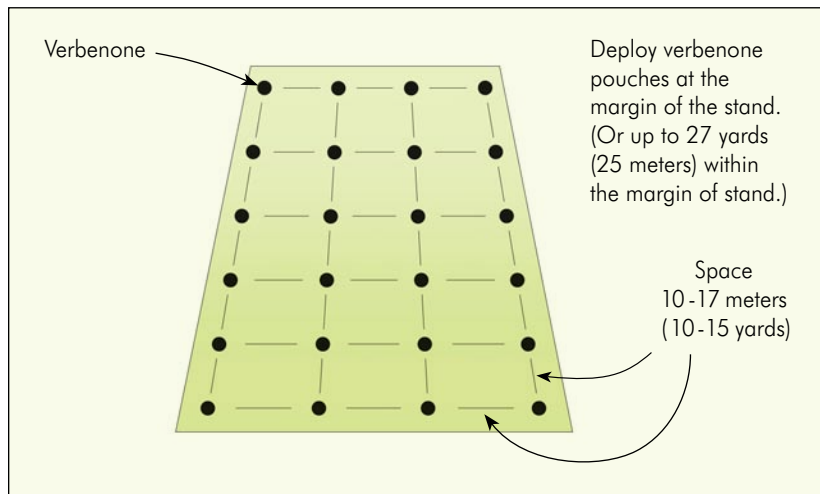
For small groups of 2 to 15 trees, treat each tree with two verbenone pouches and deploy a similar ring of surrounding pouches.

HOW TO USE

HOW TO USE (stands over .5 acres / .25 hectares)

1. Locate, fell and remove all infested trees in the stand prior to beetle flight. If it is impossible to remove trees (e.g., in remote stands) the infested trees may be felled and burned.
2. 2-3 weeks prior to beetle flight, staple 1 verbenone pouch on the north face of;
 - standing trees at 6 to 8 feet (2 to 2.5 meters) above ground
 - other vertical objects like deciduous trees or dead pines
3. Deploy verbenone at a rate of 20 pouches/acre (40 pouches / hectare) in a grid pattern throughout the infested area at 10 to 17 yard (10 to 15 meter) centers.
4. **The expected lifespan of the Mountain Pine Beetle Repellent is 60 to 120 days, weather dependent. Use a second treatment as needed.**

VERBENONE AREA PROTECTION GRID



ADDITIONAL STEPS

Practice integrated pest management; be aware of all potential control options and determine the mix that is best for your situation.

Options include:

- Remove all brood (beetle) containing trees – a critical first step.
- Assess tree stress factors (e.g. water stress, nutrient deficiencies, soil compaction) and correct these problems where feasible.
- Consider the use of aggregation pheromones to pull beetles away from the treated area. Contact us for more information.
- Early in the fall check up on how well your control program worked by looking for evidence of successful attack on standing trees. Consult a forest health professional for assistance.

Also Available

Contech's Douglas-fir and Spruce Beetle Repellent can be used to protect Douglas-fir and spruce trees from attack. If you have a problem with Douglas-fir or spruce beetles, please contact us or visit our website www.contech-inc.com to learn more.

This product is registered with the EPA and PMRA. Please contact us if additional information is required.

Contech Enterprises Inc. certifies that this product meets and conforms to the description on this label. No other warranty expressed or implied is made. Contech will not be held liable for incidental, consequential or special damages resulting from the handling, storage or use of this product.

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