

Makutu Herbicide Wand Instructions

The Makutu (derived from the Maori term for a magic that kills) Herbicide Wand is designed to apply herbicide to cut stems and trunks of woody vegetation no more than 1-1/2" diameter while minimizing herbicide use and collateral damage. It also may be used for basal bark treatment of small trees and shrubs such as grey dogwood, buckthorn and sumac and for treatment of basal rosettes of herbaceous vegetation using water soluble herbicides. We suspect that some Makutu fittings have been broken on either end of the valve because there is a tendency to use more force to apply herbicide on larger cuts, especially during cold temperatures. Therefore, we recommend that a small pump sprayer, set to trickle, be used to treat cuts of woody vegetation larger than 1-1/2" or open the valve to increase herbicide flow.

<u>Initial Assembly (3-pcs for long Makutu and 2-pcs for short Makutu)</u>

Insert bottom section (cap on one end and fitting on the other) into the top section so that the clear pipe is at the top and **hand-tighten**. Then insert this into the bottom of the brass valve and **hand-tighten**. **The plastic threads should** *easily* **turn on entering the valve**. **Cross-threading will ruin the plastic threads**. Finally insert the wick assembly and **hand-tighten**. The brass valve should face up while the wick holder should be facing downward. Each wick assembly is hand-adjusted to promote this outcome.

Filling the Primary Reservoir

- 1. Remove wick holder (top half of wick assembly) and set aside. (The fittings inside each end of the brass valve should remain in place at all times after initial assembly.)
- 2. Open brass valve by turning the control handle anti-clockwise (when opened it is parallel to body of the wand).
- 3. Use a funnel to fill the primary reservoir (the clear section of PVC pipe will show when the reservoir is full).
- 4. Replace the wick holder (the wick should be facing downward).
- 5. Close brass valve by turning the handle clockwise.

Note: Yellow gas line tape is applied to the threads of wick holder. It may be necessary to replace it if you notice leakage. The yellow tape is available in most places that sell plumbing supplies. To apply, firmly press the end of the tape to the threads and wrap the tape while overlapping it as little as possible.

Using the Makutu

Notes: While you can use herbicides mixed with bark [forestry] oil, **do not** use diesel fuel or kerosene as a carrier, as it will clog and possibly damage the PVC fittings.

In cold weather, extra care is required as the brass valve becomes much colder than the PVC fittings. A hard knock or too much downward pressure under these circumstances can break the fittings attached to the brass valve.

1. Open brass valve to fill the secondary reservoir/wick assembly and point wick toward the ground.

- 2. Close valve when wick is wet. Leaving valve fully open can lead to dripping. Sometimes, one will need to open the valve **slightly** to provide better flow of herbicide. You will have good flow when herbicide **wets** the surface of the cut and **trickles** down the sides of the stem. **Dab rather than rub herbicide on cut stems to avoid breaking the PVC fittings.**
- 3. Place wick on **oil absorbent cloth or shop towel** when laying the wand on the ground. We **do not recommend** leaning the wand against a tree or other object. If it falls to the ground in frigid temperatures or onto a hard surface, you may break the wand.

Emptying the Reservoir

- 1. When finished, hold the wand so that wick is pointing **upward**. Open the brass valve to transfer herbicide from the wick assembly to the reservoir, then close the brass valve.
- 2. Unscrew the wick holder (**not the entire wick assembly**) leaving the wick in place and put wick holder/wick in a leak proof container if you are transporting the Makutu. **Note:** You may want to obtain a threaded 3/4" PVC plug to insert into the part of the wick assembly that remains attached to the brass valve. This plug will stop herbicide remaining in the exposed threads from leaking.
- 3. Use a rag to wipe off herbicide residue from the wand and place rag in a leak proof container.

Replacing the Wick

1. Purchase Varathane Brand Applicator Refill (Rustoleumn #989731) **for Oil Based Finishes.** You can find the pads at Home Depot or possibly at your local hardware store (preferred).

- 2. Use a **sharp** scissors to cut the pad into five **lateral** strips of 2" x 5".
- 3. Remove the wick retaining screw.
- 4. Roll the strip into a **tight** cylinder and insert it into the wick holder using a twisting motion and downward pressure.
- 5. Replace and tighten the retaining screw until it is snug; exercise care to avoid over-tightening.